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Ethics of Enterprise Liability in Product Design and Marketing Litigation

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ECHOES OF ENTERPRISE LIABILITY IN PRODUCT DESIGN AND MARKETING LITIGATION

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American courts talk as though they are imposing strict enterprise liability on product manufacturers, but in truth they do so only with respect to manufacturing defects. In product design and marketing litigation, manufacturers' liability is based on fault. The reason why strict liability is inappropriate for the generic product hazards associated with design and marketing is that, in sharp contrast to manufacturing defects, the conditions necessary for insurance to function are not satisfied. Users and consumers control generic product risks to a sufficiently great extent that any insurance scheme based on strict enterprise liability would be destroyed by combinations of adverse selection and moral hazard. And yet, here and there, courts are imposing strict liability for harm caused by manufacturers' design and marketing decisions. These "echoes of enterprise liability" involve unique fact patterns in which adverse selection and moral hazard do not threaten the viability of the insurance schemes implicit in liability without fault. In reaching these remarkable outcomes, courts stretch existing doctrine beyond traditional limits. Understanding why these echoes arise and how they rest on unique factual circumstances should help prevent misunderstandings regarding their value as gnides to future developments in American products liability.

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INTRODUCTION

American courts do not impose strict liability on product manufacturers for their design and marketing decisions. Strict liability would involve "enterprise liability"—imposing liability on manufacturers merely because their products have caused harm without requiring that the products be unreasonably dangerous. Many jurisdictions, encouraged by broad language in the *Restatement (Second) of Torts*,[1] talk of imposing "strict liability" on manufacturers for mistakes in design and marketing.[2] And a handful of courts have even considered the possibility of actually imposing a form of strict liability by attributing to manufacturers knowledge of risks that were not scientifically knowable at the time of original distribution.[3] But the overwhelming majority of American courts reject attribution of knowledge and judge the manufacturers' design and marketing efforts against a reasonableness standard that sounds in negligence.[4] The recently promulgated *Restatement (Third) of Torts: Products Liability*, upon which the author served as Reporter, reflects the reality that courts base manufacturers' liability for desigu and warning on negligence, even while many courts

1 RESTATEMENT (SECOND) OF TORTS § 402A(1)–(2)(a) (1965) (stating that "[o]ne who sells *any product in a defective condition* . . . is subject to liability" "although . . . the seller has exercised all possible care" (emphasis added)).

2 *See, e.g.*, Anderson v. Owens-Corning Fiberglas Corp., 810 P.2d 549, 553–59 (Cal. 1991) (discussing the "failure-to-warn theory of strict liability").

3 *See, e.g.*, Beshada v. Johns-Manville Prods. Corp., 447 A.2d 539 (N.J. 1982) (leading case); *see also* Sternhagen v. Dow Co., 935 P.2d 1139, 1143–44 (Mont. 1997) (applying "imputation of knowledge doctrine" as part of strict liability for failure to warn).

4 *See, e.g.*, Fibreboard Corp. v. Fenton, 845 P.2d 1168, 1173 (Colo. 1993) (en banc); Vassallo v. Baxter Healthcare Corp., 696 N.E.2d 909, 923 (Mass. 1998).

continue to talk about "strict liability for defective design and failure to warn."[5]

This Article modifies this widely acknowledged and generally accurate vision of fault-based liability for design and warning defects. For the first time, the relevant case law reveals unmistakable echoes of strict enterprise liability. Here and there, without explicitly acknowledging, or perhaps even appreciating, what is happening, courts in design and warning cases are imposing strict liability on manufacturers based on the circumstance that products have caused harm, rather than because, in addition to causing harm, the products are unreasonably dangerous.[6] These distinctive echoes have nothing to do with unknowable risks. Instead, courts seem to intuit that the reasons for generally avoiding strict liability in design and warning litigation do not apply in the unusual fact patterns before them.

To understand these phenomena, it will be necessary to re-examine why courts have not applied strict liability to claims based on product design and marketing. This Article demonstrates that courts have generally rejected strict liability in connection with design and marketing because the conditions necessary for insurance to perform its function of distributing risk cannot be satisfied. The echoes of enterprise liability identified in this analysis constitute judicial reactions to unique factual circumstances involving generic product hazards in which, as in cases involving manufacturing defects, the insurance mechanism functions as intended.

If this analysis is correct, the special facts of each case justify these echoes. Moreover, by responding in this manner, courts may picture themselves as fulfilling the promise of "strict products liability" that resonates in the American legal psyche. However, judicial attempts to expand on these examples of strict liability will threaten the future stability of design and warning litigation. If significant expansion were to occur, these echoes would soon crush worthwhile enterprises under mountains of uninsurable risk. Analyzing these distinctive echoes not only reveals interesting and otherwise puzzling phenomena in recent product design and warning decisions, but also makes clear why they cannot be expanded upon in design and warning litigation generally.

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5 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 cmt. n (1998).

6 *See, e.g.*, Bresnahan v. Chrysler Corp., 38 Cal. Rptr. 2d 446 (Ct. App. 1995); *infra* notes 133–50 and accompanying text.

I

ENTERPRISE LIABILITY (EL) IN AMERICAN TORT LAW

A. Historical and Philosophical Background

In this analysis, the term "enterprise liability" (EL) connotes that commercial enterprises are strictly liable for the harms they cause, irrespective of the care they take.[7] One can trace the intellectual history of EL back to the post–World War II era in this country.[8] By the early 1950s, legal academics widely endorsed EL.[9] Since the early 1960s, it has played a prominent role in the rhetoric surrounding American tort law in general and products liability law in particular.[10] Replacing fault-based liability with EL shifts attention from simply encouraging actors to invest in care to also requiring them to insure against losses. Both negligence and EL pressure commercial enterprises to invest in accident prevention up to, but not necessarily beyond, the point at which it is cheaper to incur accidental losses than it is to prevent them.[11] But under EL, courts also require enterprises to compensate victims for those residual accident losses that are cheaper to incur than to prevent.[12] Under negligence, victims bear the residual accident losses.[13]

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7 *See* George L. Priest, *The Invention of Enterprise Liability: A Critical History of the Intellectual Foundations of Modern Tort Law*, 14 J. LEGAL STUD. 461, 463 (1985) ("[E]nterprise liability[ ] provides . . . that business enterprises ought to be responsible for losses resulting from products they introduce into commerce." (footnote omitted)).

8 *See, e.g.*, Edward H. Levi, *An Introduction to Legal Reasoning*, 15 U. CHI. L. REV. 501, 506–19 (1948).

9 *See* Priest, *supra* note 7, at 463 ("By the mid-1950s, the theory of enterprise liability commanded almost complete support within the academic community . . . .").

10 *Id.* at 461; *see also* Mark Geistfeld, *Should Enterprise Liability Replace the Rule of Strict Liability for Abnormally Dangerous Activities?*, 45 UCLA L. REV. 611, 613 (1998) ("[Enterprise liability] has been the intellectual force behind the dramatic expansion in tort liability since midcentury . . . ."); Gregory C. Keating, *The Theory of Enterprise Liability and Common Law Strict Liability*, 54 VAND. L. REV. 1285, 1333 (2001) ("[E]nterprise liability . . . has exerted a substantial influence on our law throughout the course of the twentieth century."). Discussing enterprise liability, Professor Priest explains that "[s]ince 1960, our modern civil liability regime has experienced a conceptual revolution that is among the most dramatic ever witnessed in the Anglo-American legal system." Priest, *supra* note 7, at 461.

11 The most famous articulation of this principle, of course, is that of Judge Learned Hand in *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947). *See generally* Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972) (discussing the social function of the negligence concept and the fault system of accident liability courts have built upon it).

12 *See, e.g.*, Judge Traynor's famous concurrence in *Escola v. Coca Cola Bottling Co.*, 150 P.2d 436, 440–41 (Cal. 1944) (stating that "[e]ven if there is no negligence," under strict liability "the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business").

13 If the actor is negligent, then the victim's costs are shifted to the actor. But the phrase "residual costs" implies the absence of negligence, in which case there is no liability on the part of the actor, and the victim bears the costs of the actor's activity. *See* Posner, *supra* note 11, at 32–33.

Thus, EL constitutes an insurance/compensation system in which the primary objective is loss shifting and spreading rather than loss management and prevention. Enterprise liability does not merely *involve* insurance; it *is* insurance.[14] Enterprises held strictly liable under EL function as insurers; accident victims who receive compensation for their losses are the insureds. Proponents of EL have tended to adopt an instrumental, efficiency-oriented perspective;[15] but fairness and rights-based theorists also applaud its objectives.[16] According to some observers, trends in American liability law in recent decades have been in the direction of replacing traditional negligence with various forms of EL.[17] Commentators widely believe the expansion of the products liability system during this same period has played an important part in reinforcing and accelerating these trends.[18]

B. The Necessary Conditions for Maintaining a Viable EL-Based Insurance System

A viable EL system requires that several conditions be satisfied. Three are most critical: first, the choice of subject enterprises must be fair and the boundaries must be specific; second, workable causation triggers must be present to identify valid claims; and finally, the insurance system established by EL must avoid the threats of adverse selection and moral hazard.

Regarding the task of selecting and describing the EL boundaries, enterprises must not appear to have been included or excluded arbitrarily, in order to satisfy political expediency. Commentators[19] have justly criticized attempts in recent decades to single out the as-

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14 In contrast, insurance plays no inherent, logically necessary role in connection with fault-based liability. Actors who are likely to be liable for negligently caused harm may choose to purchase commercial insurance against that contingency and victims who are likely to suffer loss at the hands of other actors may choose to purchase insurance covering those losses. But negligence-based liability functions perfectly well if neither actors nor victims buy insurance. From the standpoint of pure theory, actors do not need liability insurance and, from the standpoint of public policy, one may question whether actors, even if they want commercial insurance against negligence-based liability, should be allowed to buy it.

15 *See, e.g.*, James A. Henderson, Jr., *Coping with the Time Dimension in Products Liability*, 69 CAL. L. REV. 919, 931–36 (1981); Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 24–25 (1980).

16 *See* Henderson, *supra* note 15, at 936–39.

17 *See supra* note 10 and accompanying text.

18 *See, e.g.*, Mark Geistfeld, *Implementing Enterprise Liability: A Comment on Henderson and Twerski*, 67 N.Y.U. L. REV. 1157 (1992); *see also* Priest, *supra* note 7, at 463 ("In my view, the contours of modern tort law reflect a single coherent conception of the best method to control the sources of product-related injuries.").

19 *See, e.g.*, Richard A. Epstein, *Market and Regulatory Approaches to Medical Malpractice: The Virginia Obstetrical No-Fault Statute*, 74 VA. L. REV. 1451 (1988).

bestos industry for especially harsh liability treatment,[20] or the obstetrical profession for especially lenient treatment.[21] Moreover, even if the selection of covered enterprises is even-handed, the description of these enterprises must be specific, so that the threshold question of whether EL applies is placed beyond serious controversy in most cases. Simply stated, the boundaries must be sufficiently bright-line to avoid elaborate balancing on a case-by-case basis.

The second necessary condition for maintaining the viability of an EL system is the development of workable causation triggers. Conceptually, these triggers will consist of both actual and proximate causation. In most EL systems, a claimant proves the first, essentially empirical, element of actual causation by showing that the claimant's harm would not have occurred but for the enterprise having acted in the first instance.[22] In addition to but-for causation, which is capable of including within its reach an overwhelmingly large number of potential claims, EL systems also must impose a second, essentially normative, requirement of proximate causation. Even if a claimant's harm is actually caused by a defendant's enterprise, it must be the type of harm, suffered by the type of victim, that a reasonable person would anticipate when implementing a particular version of EL in the first instance.[23]

The third necessary condition for EL viability relates to maintaining the integrity of the insurance system established to cover valid claims. Of the first three prerequisites of viability, this is the one observers most often overlook or downplay in assessing EL's potential.[24] In any insurance system, insureds transfer their risks of loss to insurers, who pool the risks of many insureds in order to render predictable the anticipated aggregate losses that will be experienced.[25] In

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20 *See, e.g.*, Feldman v. Lederle Labs., 479 A.2d 374, 387 (N.J. 1984) (noting that standard of knowledge applicable to experts in the field would apply with particular harshness to manufacturers in fields that impact public health).

21 *See, e.g.*, Virginia Birth-Related Neurological Injury Compensation Act, VA. CODE ANN. §§ 38.2-5000–5021 (Michie 1999 & Supp. 2001). For a description of the Act, see Peter H. White, Note, *Innovative No-Fault Tort Reform for an Endangered Specialty*, 74 VA. L. REV. 1487, 1489–94 (1988).

22 *See* WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS § 41, at 242 (3d ed. 1964) ("The defendant's conduct is not a cause of the event, if the event would have occurred without it.").

23 The best-known American articulation of this requirement in the context of negligence law is Chief Judge Cardozo's dictum in *Palsgraf v. Long Island Railroad Co.*, 162 N.E. 99, 100 (N.Y. 1928) ("The risk reasonably to be perceived defines the duty to be obeyed . . . .").

24 *But see* Richard A. Epstein, *The Legal and Insurance Dynamics of Mass Tort Litigation*, 13 J. LEGAL STUD. 475, 495–505 (1984); James A. Henderson, Jr. & Jeffrey J. Rachlinski, *Product-Related Risk and Cognitive Biases: The Shortcomings of Enterprise Liability*, 6 ROGER WILLIAMS U. L. REV. 213, 238–41 (2000); George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521, 1550–63 (1987).

25 *See* KENNETH S. ABRAHAM, INSURANCE LAW AND REGULATION 2 (3d ed. 2000).

connection with EL, the enterprise functions as insurer and the insureds are either bystander victims or customers who automatically receive insurance against loss when they purchase goods or services from the enterprise. For any insurance system to survive, the risks to be covered must be ascertainable at the time of their transfer, ex ante, and the losses must be ascertainable when claims are made, ex post. In addition, insureds must pay premiums—in connection with EL, by means of uniform increments embedded in the prices of goods and services supplied commercially by the enterprise—that reflect their contributions to the relevant risk pools. The covered losses experienced by individual insureds will not necessarily be proportional to the premiums each paid earlier.[26] But, in the aggregate and over time, premiums paid in must cover claims paid out.

The contractual mechanism by which insurers keep premiums proportional to insureds' contributions to the risk pools is risk classification.[27] Risk classification combats adverse selection, which occurs when high-risk insureds pay premiums that do not adequately reflect their high-risk status—when they are undercharged relative to lower-risk insureds.[28] When this happens, lower-risk insureds leave the insurance pools that are overcharging them,[29] and the insurer must raise premiums to cover the higher-risk insureds who remain. Such premium increases precipitate further exodus by a new set of relatively lower-risk insureds, requiring further premium increases, and so on. Risk classification protects against this "unraveling" of insurance pools by making sure that participants in the risk pools pay premiums that are fairly proportional to the risks of loss those participants bring with them. If for any reason—as with most EL systems—the premiums charged are uniform across insureds, either the risks contributed by insureds must also be uniform or the choice of whether to be covered must not be within individual insureds' control.[30]

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26 The objective of insurance is to hold harmless those insureds who experience relatively larger losses, ex post, in exchange for affordably smaller premiums, ex ante. *See* KENNETH S. ABRAHAM, DISTRIBUTING RISK 1–2 (1986).

27 *See* ABRAHAM, *supra* note 25, at 4.

28 *Id.* at 3–4.

29 This assumes that lower-risk insureds realize they are being overcharged, a reasonable assumption in a competitive insurance market.

30 Under EL, the premiums charged are uniform because it is all but impossible to price discriminate when commercially distributing goods and services. Moreover, the risks of loss contributed by insureds are not likely to be uniform, if only because the measure of recovery in tort will reflect the idiosyncrasies of individual plaintiffs. *See* George L. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1350 (1981). It follows that the best and only chance of combating adverse selection is the fact that most insureds have no real choice regarding whether or not to be covered. Bystander victims certainly have no choice; nor, for that matter, do most purchasers of needed goods and services against whom manufacturers' disclaimers have little legal effect. *Cf. infra* notes 177–82 and accom-

Another threat to the viability of any insurance scheme is moral hazard—the natural tendency for insureds, unless prevented by the relevant terms of coverage, to increase their risks of incurring covered losses by conduct engaged in after the insurance arrangements take effect.[31] Like adverse selection at the time of contracting, moral hazard after contracting threatens to allow higher-risk insureds to pay less than they should for coverage. And also like adverse selection, moral hazard tends to drive lower-risk insureds out of the insurance pools, thereby threatening the insurance scheme with crushing liabilities at the hands of the higher-risk insureds who remain. The only means of combating moral hazard in commercially marketed insurance is careful drafting of the contracts to deny coverage for losses resulting from deliberate or reckless post-contract conduct by insureds that significantly increases the relevant risks of loss.[32] When the law requires enterprises to act as insurers, the law itself must perform the same protective function.

The implications of the foregoing descriptions of adverse selection and moral hazard for maintaining the viability of an EL-based insurance system are clear. Reliance on the sort of complex contractual language typically employed in commercial insurance policies is out of the question.[33] The terms of EL coverage are imposed in law and thus will be relatively crude when measured by commercial insurance standards. Moreover, the law discourages and even prohibits attempts by enterprises to modify their legal obligations via contract.[34] It follows that the applicable law governing the obligations of the enterprise must ensure that higher-risk individuals cannot self-selectively obtain coverage at the same cost as lower-risk individuals. The law must not allow those who do obtain coverage to increase the risk of covered losses significantly once the enterprise's obligation to insure is in place. Victims, in other words, must play a passive role in the EL

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panying text (discussing Second Circuit case imposing strict liability under "informed consent" concept).

31 *See* ABRAHAM, *supra* note 25, at 4.

32 All commercial insurance contracts covering accidental loss exclude situations in which applicants know particular losses are likely to occur, or in which insureds knowingly or recklessly cause covered losses. *See, e.g.*, Unigard Mut. Ins. Co. v. Argonaut Ins. Co., 579 P.2d 1015, 1017 (Wash. Ct. App. 1978) (fire insurance policy excluded losses that were "either expected or intended from the standpoint of the insured" (emphasis omitted)); *see also* Commercial Union Ins. Co. v. Taylor, 312 S.E.2d 177, 178–79 (Ga. Ct. App. 1983) (fire policy excluded losses when "the hazard was increased by any means within the control or knowledge of the insured").

33 The policy language typically devoted to combating these threats is quite lengthy. *See, e.g.*, ABRAHAM, *supra* note 25, at 4.

34 *See generally* James A. Henderson, Jr., *Agreements Changing the Forum for Resolving Malpractice Claims*, LAW & CONTEMP. PROBS., Spring 1986, at 243 (discussing the effectiveness of alternative methods by which insurers modify their obligations through arbitration and pretrial screening panels).

system.[35] When covered accidental losses are likely to result from the use or consumption of instrumentalities provided by the enterprise to its customers, those customers must not be able to increase the risks of covered losses through their modes of use or consumption. Instead, the purchase of goods and services must be tantamount, from the insurance standpoint, to the placement of a wager on a roulette wheel. Once the bet is made—once the insured purchases the goods and services along with the built-in insurance against accidental loss—the purchasers or victims must not have the power to manipulate significantly the chances of incurring loss in a manner that is detrimental to the enterprise in its role as insurer.[36]

Two comparatively less important prerequisites for maintaining EL viability remain. First, the probability that any individual exposed to risk will actually suffer a covered loss must be small. Invoking the costly claims apparatus of EL should not be a routine, commonplace event. Second, each covered loss, when it occurs, should typically be substantial. When the losses caused by an enterprise tend to be comparatively small, especially in connection with tort-based EL administered by courts, forms of self-insurance by potential victims are appropriate.[37] Together, these concerns regarding the probabilities and magnitudes of loss reflect not only the substantive objectives of EL, but also legitimate concerns regarding EL's viability. To some extent, the plaintiff's bar and contingent fee arrangements will screen claimants and prevent EL systems from being "pecked to death" by large numbers of relatively small claims.[38] Tort-based EL systems, however, must also protect themselves by defining covered losses to minimize their exposure to nuisance claims.

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35 *See generally* Richard A. Merrill, *Compensation for Prescription Drug Injuries*, 59 VA. L. REV. 1, 90–99 (1973) (discussing this thesis in the drug context in light of the fact that drug consumers are in the worst position to reduce the risk of injury).

36 *Cf. supra* notes 33–34 and accompanying text (discussing contractual means of avoiding adverse selection and moral hazard problems). A fairly common form of cheating at roulette tables in gambling casinos is attempting by sleight-of-hand to increase the size of one's bet after one's number, or color, has come up a winner. *See* Peter G. Demos, Jr., *Roulette Game Protection*, *in* KATHRYN HASHIMOTO ET AL., CASINO MANAGEMENT: PAST, PRESENT, FUTURE 117 (2d ed. 1998).

37 In commercial insurance policies, deductibles and co-insurance provisions allow insureds to bear some of the risk of loss in exchange for corresponding reductions in premiums. *See* ABRAHAM, *supra* note 26, at 2.

38 The modifier "relatively" is important here. Based on the author's own observation, at the time of this writing, a products liability claim in major East Coast cities must have an expected value—the probability of success times the recovery if successful—of several hundred thousand dollars to attract a top-flight plaintiff's law firm.

C. Remarkable Examples of EL in American Law

1. *Judicially Created EL: Abnormally Dangerous Activities*

Since the House of Lords first recognized this version of EL in England in the mid-nineteenth century,[39] a number of jurisdictions in this country have followed suit.[40] Indeed, the American Law Institute included the rule of strict liability for harm caused by abnormally dangerous activities in its *Restatement (Second) of Torts*, published in 1965.[41] Both the *Restatement* and the decisions that follow its rule make clear that liability is strict and that one who engages in an abnormally dangerous activity is an insurer against harm to persons or property caused by that activity.[42] Although formal statements of the rule do not explicitly require that the activity be carried on commercially, every reported decision applying the rule involves a commercial defendant.[43] Courts apply a checklist of factors in selecting commercial activities and enterprises for strict-liability treatment.[44] Whether a given commercial activity is "abnormally dangerous" is not decided on a case-by-case basis by triers of fact.[45] Such a piecemeal approach to establishing boundaries would clearly threaten the viability of the EL system. Instead, courts define the categories that satisfy the criteria, as a matter of law, with relatively crisp, delineated boundaries.[46] This assures necessary stability and predictability, allowing the affected en-

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39 *See* Rylands v. Fletcher, 3 L.R.-E. & I. App. 330 (H.L. 1868).

40 *See, e.g.*, Chavez v. S. Pac. Transp. Co., 413 F. Supp. 1203, 1207 (E.D. Cal. 1976); Klein v. Pyrodyne Corp., 810 P.2d 917, 919 (Wash.), *amended by* 817 P.2d 1359 (Wash. 1991).

41 *See* RESTATEMENT (SECOND) OF TORTS §§ 519–20 (1965).

42 *Id.* § 519 ("One who carries on an abnormally dangerous activity is subject to liability . . . although he has exercised the utmost care to prevent the harm."); *see also* Siegler v. Kuhlman, 502 P.2d 1181, 1186–87 (Wash. 1972) (discussing the application of the rule of strict liability to abnormally dangerous activity).

43 *See supra* notes 40, 42.

44 *See* RESTATEMENT (SECOND) OF TORTS § 520 (1965):

> In determining whether an activity is abnormally dangerous, the following factors are to be considered:
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> (a) existence of a high degree of risk of some harm to the person, land or chattels of others;
> (b) likelihood that the harm that results from it will be great;
> (c) inability to eliminate the risk by the exercise of reasonable care;
> (d) extent to which the activity is not a matter of common usage;
> (e) inappropriateness of the activity to the place where it is carried on; and
> (f) extent to which its value to the community is outweighed by its dangerous attributes.

45 *See* O'Brien v. Muskin Corp., 463 A.2d 298, 313 (N.J. 1983) (Schreiber, J., concurring and dissenting) (arguing in favor of "abnormally dangerous" approach in place of "design defect" approach, and observing that "[i]t is important to note that the risk-utility analysis is *not* submitted to the jury for the purpose of determining absolute liability").

46 *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 520 cmt. *l* (1965) (stating that determination of which activities qualify is a legislative-type decision for the courts to make as a matter of law).

terprises to maintain the requisite pools of insurance. And it allows accident victims to sort themselves out after the accidental injury, reducing transaction costs of claims processing.

The causation triggers that replace findings of fault in determining the validity of claims against enterprises engaged in abnormally dangerous activities conform to the prerequisites described earlier. Courts require a cause-in-fact connection between defendant's activity and plaintiff's harm. When it is clear that no activity by defendant was a but-for condition to the plaintiff's harm, the court must deny the plaintiff's claim as a matter of law,[47] and plaintiff must establish proximate cause. The defendant enterprise is liable without fault only for "the kind of harm, the possibility of which makes the activity abnormally dangerous" in the first place.[48] For example, assuming that courts have deemed hauling explosives by truck an abnormally dangerous activity, the enterprise engaged in such hauling is not strictly liable for all the harm its trucks actually cause while hauling explosives—minor fender-benders that do not involve explosions, for example, are not covered by EL insurance. Instead, only those harms that the explosive qualities of the cargo cause implicate EL.[49] And even when an explosion occurs, the hauling enterprise will not be liable for harm caused to persons miles away who may be upset by the distant rumblings produced by such an event.[50]

What of the third requirement that adequate safeguards protect the EL insurance scheme against adverse selection and moral hazard? As with the first two conditions, this traditional version of judicially created EL adequately satisfies this third condition. Thus, the victims of commercial activities that courts have traditionally held to be abnormally dangerous—for example, persons harmed when dynamite blasting hurls rocks onto their houses or their heads—are almost always passive bystanders.[51] And courts describe the losses for which the

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47 *See, e.g.*, Lentz v. Mason, 961 F. Supp. 709, 719 (D.N.J. 1997) ("Plaintiff has cited no cases imposing strict tort liability for ultrahazardous activity on a party who is not even alleged to have been connected with the . . . activity. . . . [The parties'] connection to the alleged harmful conduct is too remote to support liability as a matter of law.").

48 RESTATEMENT (SECOND) OF TORTS § 519(2) (1965).

49 *Id.* § 519 cmt. e.

50 *See, e.g.*, Foster v. Preston Mill Co., 268 P.2d 645, 648 (Wash. 1954) ("The relatively moderate vibration and noise which appellant's blasting produced at a distance of two and a quarter miles was no more than a usual incident of the ordinary life of the community."); *see also* RESTATEMENT (SECOND) OF TORTS § 524A (1965) (providing examples of harm caused due to "abnormally sensitive activity" of plaintiffs).

51 *See* KENNETH S. ABRAHAM, THE FORMS AND FUNCTIONS OF TORT LAW 170 (1997) ("To the extent that an [ultrahazardous] activity . . . is uncommon, those who are its potential victims are unlikely to . . . be in a position to do much to protect themselves against the risk the activity poses."); William K. Jones, *Strict Liability for Hazardous Enterprise*, 92 COLUM. L. REV. 1705, 1714 (1992) ("[I]t is difficult to imagine what precautions an ordinary person might take to guard against the harms inflicted by high explosives, radioactive emissions,

enterprises are liable in terms that limit the enterprise's exposure when it appears that victims have either deliberately placed themselves in harm's way or refused to adopt reasonable safeguards against injury.[52] The instrumentalities that cause injury are typically within the exclusive control of the enterprise; when they are not, primary or exclusive responsibility for losses tends to fall on those outside the enterprise who exercise control.[53] And finally, the expected values of the losses covered by this version of EL are typically quite high. Indeed, the description of activities that are abnormally dangerous includes a requirement that the activity be likely to cause harms that are great.[54]

One can appreciate how EL systems for abnormally dangerous activities satisfy the conditions for viability by briefly considering the potential viability of a hypothetical system imposing EL on the commercial suppliers of the instrumentalities used in the activities. One example would be the sellers of the trucks and explosives used in the hauling-explosives hypothetical. If the definition of the sales-based enterprises were simply "commercial sellers of trucks and explosives," one could question why the sellers of other types of vehicles and dangerous cargoes were not included.[55] At the same time, if the definition were to include all motor vehicles, how would the issue of proximate causation be resolved? The foreseeable risks created by selling motor vehicles *do* include the fender-benders properly excluded from the hauling-explosives example.[56] And what would prevent adverse selection and moral hazard from destroying the insurance component of such an EL system? Presumably, the purchaser of a truck used round-the-clock to haul dangerous explosives in a large city would pay the same insurance premium as a farmer who purchased the same truck and used it once a week to haul eggs to

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bursting reservoirs, oil well 'blow outs,' or conflagrations of large accumulations of combustibles."). The plaintiffs in all of the cases cited in this discussion were bystander victims.

52 *See* RESTATEMENT (SECOND) OF TORTS §§ 523–24 (1965).

53 *See, e.g.*, Hawkins v. Evans Cooperage Co., 766 F.2d 904 (5th Cir. 1985). *See generally* 1 DAVID G. OWEN ET AL., MADDEN & OWEN ON PRODUCTS LIABILITY § 6:2 (3d ed. 2000) ("The plaintiff's abnormally dangerous activities cause of action will fail in the absence of a showing that the defendant directly controlled the activity.").

54 *See* RESTATEMENT (SECOND) OF TORTS § 520(b) (1965).

55 The abnormally-dangerous-activities-doctrine includes a variety of dangerous cargoes. *See* 1 OWEN ET AL., *supra* note 53, § 6:10.

56 Explosives, by their nature, imply a limited range of accidents unique to their use and handling. *See supra* note 49 and accompanying text. Motor vehicles also imply similar limits. Running on foot into a parked truck, for instance, would not implicate strict liability, but a much wider range of automobile accidents than those involving explosives, including minor accidents, implicate strict liability.

market.[57] If both pay the same premiums, how could egg farmers ever afford to buy new trucks?[58] Even within the class of purchasers of trucks used to haul explosives, who presumably would pay the same premiums, some would run careful operations and others, careless operations. Clearly, the traditional abnormally-dangerous-activity version of EL maintains viability by imposing strict liability on the users of trucks to haul explosives rather than the suppliers of trucks and/or explosives. Truck users create and control the relevant risks of harm, not truck suppliers; EL-based insurance must focus on those who create and control the relevant risks.[59]

2. *Legislatively Created EL: Workers' Compensation*

In the first half of the twentieth century, legislatures in every American jurisdiction enacted statutes that required commercial employers to establish insurance-based EL systems covering their employees for all work-related accidental injuries.[60] These compensation systems replace fault-based tort;[61] claimants receive benefits according to established schedules that do not include intangible, noneconomic losses such as pain and suffering.[62] Administrative proceedings address claims, which reach court only in unusual cases.[63] These statutory EL systems describe the types of employers covered with precision sufficient to all but eliminate disputes regarding that aspect of coverage.[64] The causation triggers rely on straightforward time-and-space

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57 The problem is that price discrimination—charging haulers of explosives more for trucks than one charges haulers of eggs—is not feasible because the seller cannot control the activity in which any given truck is engaged after purchase.

58 "Truck insurance" packages would significantly overcharge the egg farmers and would subsidize the explosives transporters, whom the insurance would significantly undercharge. Farmers would be well-advised to turu to horse-drawn wagons to haul their eggs. *Cf. supra* notes 28–30 and accompanying text (discussing the role of risk classification in combating the negative effects of adverse selection).

59 For a useful discussion of this point, see James A. Henderson, Jr. & Aaron D. Twerski, *Closing the American Products Liability Frontier: The Rejection of Liability Without Defect*, 66 N.Y.U. L. Rev. 1263, 1321–22 (1991).

60 *See generally* James A. Henderson, Jr. et al., The Torts Process 722–24 (5th ed. 1999) (discussing the growth of workers' compensation statutes).

61 *Id.* at 723.

62 *See id.*

63 For example, in Massachusetts, workers' compensation claims reach court only if one of the parties appeals the decision of the compensation board. The superior court then has limited review powers over the board's decision, in that it can examine questions of law, but cannot alter findings of fact. *See* James A. Henderson, Jr. & Richard N. Pearson, The Torts Process 847–49 (3d ed. 1988) (discussing Massachusetts court interpretation in workers' compensation cases).

64 *See id.* at 845–50. For example, the Massachusetts statute does not cover professional athletes who are otherwise compensated for work-related injuries, nor does it include real estate brokers who work only on commission. Also excluded are those who are not employed in the employer's usual course of business. *See* Mass. Ann. Laws ch. 152, § 1(4) (Law. Co-op. 2000).

boundaries that cover all accidental harms if they occur at work, even if such harms do not result from risks peculiar to the workplace.[65] Workers' compensation covers all accidental injuries, even lesser losses analogous to the "fender-benders" excluded from the hypothetical involving hauling explosives by truck, a commitment rendered manageable by the scheduling of benefits and administrative claims processing. For losses that occur outside the workplace, the system relies on special proximate-causation rules to establish work connection.[66]

The effects of adverse selection and moral hazard on worker compensation insurance pools diminish because coverage is available to potential claimants only in connection with their full-time employment, assuring risk pools comprising mostly normal, healthy insureds.[67] Workers cannot shop among employers for more favorable terms because those terms are uniform across employers within a given state.[68] And employers presumably screen, at the time of hiring, unhealthy, accident-prone job applicants who might seek employment primarily in order to receive coverage.[69] To limit moral hazard in the form of workers failing to act reasonably to protect themselves and their fellow workers from injury, every worker compensation system excludes intentionally self-inflicted injuries.[70] And the reality that employers control their workplaces presumably constrains other behavioral aberrations by covered employees that might threaten the insurance pools.

As with the court-made EL systems based on abnormally dangerous activities, it is revealing to consider whether a statutory EL system covering workplace injuries could remain viable if it were to shift responsibility for maintaining insurance from employers to the commercial enterprises that supply the dangerous equipment and machinery

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65 In Massachusetts, as in most other states, the injury must be "arising out of and in the course of [the] employment." *Id.* § 26.

66 *See, e.g.*, Thornton v. Chamberlain Mfg. Corp., 300 A.2d 146 (N.J. 1973) (ordering compensation for claimant attacked by former co-employee motivated by on-the-job dispute, although attack occurred off employment premises and nine days after claimant left employment).

67 This built-in assurance of having a normal risk pool is reflected in group insurance, for which pre-coverage screening is typically minimal. *See generally* JOHN F. DOBBYN, INSURANCE LAW IN A NUTSHELL 14–22 (1st ed. 1981) (discussing the nature and types of group insurance).

68 *See* HENDERSON ET AL., *supra* note 60, at 723–24.

69 In any event, the employer-insurer controls the hiring of employees and presumably will invest optimally in this regard. *Cf.* ABRAHAM, *supra* note 25, at 4 (discussing protective measures taken by insurers).

70 Under the Massachusetts statute, compensation is not paid if the employee's "serious and willful misconduct" causes the injury. *See* MASS ANN. LAWS. ch. 152, § 27 (Law. Co-op. 2000).

involved in workplace accidents.[71] Defining manageable boundaries would be difficult. Would the system include suppliers of all machinery and equipment to all employers, or only suppliers of productive machinery to large employers? How would the system determine actual causation when two or more durable goods combine to cause injury? Suppose, for example, that a forklift supplied by one enterprise bumps into a worker and pushes him into a punch press supplied by another enterprise. Given that both instrumentalities are but-for causes of the accident, would both equipment suppliers be responsible in an EL system? By what criteria would the system resolve issues of proximate causation for accidents that bear no logical connection to the workplace? Even if courts could work out these difficulties, adverse selection and moral hazard would destroy any such insurance system for workplace accidents. Dozens of overworked employees might use any given piece of inherently dangerous equipment supplied to a productive business in round-the-clock shifts, seven days a week, in a large industrial complex; or a single, well-rested employee in a mom-and-pop operation might use the same equipment. Charging the same premium in both cases would lead to obvious difficulties. Differential pricing could not solve these problems because changes in any given purchaser's operations—including dangerous modifications of the equipment—could occur at any time during the long, useful lives of workplace machinery.[72]

In short, any attempt to shift responsibility for worker compensation–type EL systems from employers to commercial suppliers of equipment would be doomed to fail, for reasons that closely parallel those identified earlier in connection with supplier-based EL systems relating to abnormally dangerous activities.[73] The lesson in both contexts is clear: for any EL system to maintain viability, the enterprise held liable as an insurer must control the risks insured against, or at least the risks must not be controllable, after the insurance takes effect, by others outside the insuring enterprise. Returning to an earlier metaphor, the operator of an honest roulette wheel can stay in business, and perhaps even prosper, by knowing the odds and keeping aggregate payouts lower than wagers placed, even though the operator cannot control where the ball will land with each spin of the wheel.[74] But the same operator will surely face crushing losses when

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71 *See supra* notes 55–59 and accompanying text.

72 *See supra* note 57.

73 *See supra* notes 55–59 and accompanying text.

74 *See* VIRGINIA L. GRAHAM & C. IONESCU TULCEA, A BOOK ON CASINO GAMBLING WRITTEN BY A MATHEMATICIAN AND A COMPUTER EXPERT 39–41 (1976) (observing that the house has a 5.26% advantage when a player bets a single number in roulette).

those placing wagers can control the ball or change the bets to their advantage after the wagers are made and the wheel has been spun.[75]

D. Why So Few Examples of EL Exist in American Liability Law

Given the enthusiasm that American legal academics have shown in support of EL,[76] one would expect to encounter much of it in today's tort landscape. However, outside of products liability, examples of EL are relatively rare. Negligence, not EL, dominates the American tort scene.[77] Thus, courts have deemed "abnormally dangerous" only a relatively small number of commercial activities,[78] and expansion in the future appears unlikely. The storage, use, and transportation of explosives and other hazardous substances such as gasoline and toxic chemicals account for most "abnormally dangerous" activities.[79] Courts have refused to impose strict enterprise liability on large utility companies that collect and distribute great quantities of water, sewage, natural gas, and electricity posing significant risks to the public.[80] And courts have rejected attempts by plaintiffs to extend strict liability to commercial enterprises that supply machinery, vehicles, and other equipment to those who themselves engage in activities deemed abnormally dangerous.[81]

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75 *See* Demos, *supra* note 36, at 117.

76 *See supra* note 10.

77 For a historical perspective, see Gary T. Schwartz, *Tort Law and the Economy in Nineteenth-Century America: A Reinterpretation*, 90 YALE L.J. 1717 (1981). *See also* Gerald W. Boston, *Strict Liability for Abnormally Dangerous Activity: The Negligence Barrier*, 36 SAN DIEGO L. REV. 597, 599 (1999) ("Why have courts been so reluctant to embrace [strict liability for abnormally dangerous activity]? [G]ourts reject strict liability because they conclude that the negligence system can function effectively in enforcing safety concerns associated with the activity."); *infra* notes 78–81 and accompanying text (noting areas where courts have refused to extend strict enterprise liability).

78 *See* Boston, *supra* note 77, at 598 ("[S]trict liability for abnormally dangerous activity . . . has evolved to the point of near extinction . . . ."); Stephen D. Sugarman, *A Century of Change in Personal Injury Law*, 88 CAL. L. REV. 2405, 2407 (2000).

79 *See* 1 OWEN ET AL., *supra* note 53, § 6:12 ("Many courts have refused to extend this principle of strict liability for abnormally dangerous activities beyond those associated with blasting or hazardous chemicals and substances."); *see also* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL HARM (BASIC PRINCIPLES) § 20 reporters' note cmt. e (Tentative Draft No. 1, 2001) ("Indeed, in certain jurisdictions blasting is essentially the only activity that has been given strict-liability treatment . . . .").

80 *See, e.g.*, Moore v. Sharp Gas Inc., No. 90-504 MMS, 1992 WL 147930, at *2–*3 (D. Del. June 11, 1992) (holding that the operation of natural gas lines is not an abnormally dangerous activity); Voelker v. Delmarva Power & Light Co., 727 F. Supp. 991, 994 (D. Md. 1989) (holding that the transmission of electricity via high-voltage power lines is not an abnormally dangerous activity); Estate of Thompson v. Jump River Elec. Coop., 593 N.W.2d 901, 904–06 (Wis. Ct. App. 1999) (holding that an employee who works with high-voltage electricity is not engaged in an abnormally dangerous activity).

81 *See, e.g.*, Cropper v. Rego Distribution Ctr., Inc., 542 F. Supp. 1142, 1147–49 (D. Del. 1982) (holding that the manufacturer of machinery utilized to store and transport hazardous chemicals is not subject to strict liability even though the purchaser of the machinery utilized it as part of an abnormally dangerous activity); Cavan v. Gen. Motors

Courts explain their refusals to extend the boundaries of the abnormally-dangerous-activities concept in mostly doctrinal terms. For example, the opinions frequently refer to the circumstance that the defendant's activity, while admittedly quite dangerous, was a daily occurrence and constituted common, rather than abnormal, usage.[82] Beneath the surface of those opinions, of course, lies the reality that the cases only infrequently satisfy the conditions for insurance viability described above, especially when those conditions reflect concern for the negative effects of adverse selection and moral hazard. Too often the defendant enterprises that plaintiffs seek to hold strictly liable as insurers are not in positions—as are the insureds—to control the risks of loss that the EL insurance proposed by plaintiffs would cover. Although courts do not speak of "adverse selection" and "moral hazard" in articulating this concern, their doctrinal explanations often reveal an intuitive grasp of the underlying problem. Thus, some courts have denied strict liability because the defendants did not sufficiently control the dangerous activities in question,[83] or did not control the behavior of third persons who came into contact with, and were injured by, instrumentalities that would be covered by the EL insurance system proposed by plaintiffs.[84]

Regarding statutory EL systems based on the workers' compensation model, again one finds surprisingly few examples. As noted earlier, the workplace is a venue where serious accidents frequently occur and employers required to operate EL systems are in control of the relevant variables. Although other suitable environments for EL undoubtedly exist, attempts to export the workers' compensation model have not, on the whole, been successful. Thus, the American Bar Association conducted a study in the late 1970s inquiring into the feasibility of a legislatively implemented EL system covering adverse medical outcomes.[85] Hospitals and other medical treatment centers would replace workplaces as the physical environments in which cov-

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Corp., 571 P.2d 1249, 1251 (Or. 1977) ("Historically, the strict liability rule . . . is applied when an *activity* creates an abnormally dangerous condition, or by its nature presents extraordinary risk of harm . . . . It has no applicability in a products case.").

82 *See, e.g., Voelker*, 727 F. Supp. at 994 (holding that transmission of electricity is a daily occurrence and constitutes common usage).

83 *See, e.g.*, Ainsworth v. Shell Offshore, Inc., 829 F.2d 548 (5th Cir. 1987) (rejecting imposition of liability because defendant oil company did not participate in operation in question); Heinrich v. Goodyear Tire & Rubber Co., 532 F. Supp. 1348, 1357 (D. Md. 1982) (dismissing strict liability claims against defendant tire company because it did not maintain or operate the plant at which plaintiff injured himself).

84 *See, e.g., Voelker*, 727 F. Supp. at 991; Dixon v. Northeast La. Power Coop., Inc., 524 So. 2d 35, 41–42 (La. Ct. App. 1988) (holding that an electric utility was not strictly liable when decedents were electrocuted because the 32-foot-high CB antenna they were installing contacted a 28-foot-high uninsulated power line).

85 *See* ABA COMM'N ON MED. PROF'L LIAB., DESIGNATED COMPENSABLE EVENT SYSTEM: A FEASIBILITY STUDY (1979).

ered accidents occurred, and medical care providers would replace employers as the entities providing EL insurance.[86] This author served as legal consultant to the project. As with workers' compensation, drafting problems had more to do with boundaries and causation triggers than with maintaining viability from an insurance perspective.[87] In the end, the ABA study judged that the proposed EL system for medical accidents was too problematic to warrant even experimental implementation.[88]

At this time, very few, if any, statutory EL systems based on the workers' compensation model are extant. Congress established one such system in the 1970s to cover negative side effects from the federal vaccine program launched in response to the swine flu epidemic.[89] Upon reflection, vaccine programs are ideal candidates for EL.[90] Except for claims verification problems in connection with the element of actual causation,[91] the insurance aspects of such a vaccine compen-

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86 For a description of the proposal, see James A. Henderson, Jr., *The Boundary Problems of Enterprise Liability*, 41 MD. L. REV. 659 (1982).

87 *Id.* at 662–80.

88 *See* Kirk B. Johnson et al., *A Fault-Based Administrative Alternative for Resolving Medical Malpractice Claims*, 42 VAND. L. REV. 1365, 1376–77 (1989) (citing ABA COMM'N ON MED. PROF'L LIAB., *supra* note 85). Johnson et al. note that the ABA's Designated Compensable Event program was rejected because of "concern that either the costs of such a system would be excessive or it would be necessary to apply strictly scheduled benefits and that such gnaranteed but limited benefits would be widely perceived as inadequate compensation." *Id.* (footnotes omitted). *Cf.* Larry M. Pollack, *Medical Maloccurrence Insurance (MMI): A First-Party, No-Fault Insurance Proposal for Resolving the Medical Malpractice Controversy*, 23 TORT & INS. L.J. 552, 576–78 (1988) (discussing features of the ABA's Designated Compensable Event program and concluding that such a system, if implemented, "would retain all the current problems of doctor-patient adversity and poor provider cost spreading, magnified by the increased number of claims").

89 *See* National Swine Flu Immunization Program of 1976, Pub. L. No. 94-380, § 2, 90 Stat. 1113 (1976) (amending section 317 of the Public Health Service Act, 42 U.S.C. § 247b (1970)); *see also* Carlin v. Superior Court, 920 P.2d 1347, 1361 (Cal. 1996) (Kennard, J., concurring and dissenting) ("In 1976, because the threat of excessive tort liability was deterring drug manufacturers from developing a vaccine for swine flu needed to protect public health, Congress enacted the Swine Flu Act, under which the federal government assumed the risk of lawsuits arising from injuries associated with the vaccine."). Authorization for the Program expired on August 1, 1977. *See* Sally-Anne Danner, Note, *The Vaccine Ailment: A Cure to Encourage Litigation-Shy Pharmaceutical Companies to Manufacture an AIDS Vaccine*, 14 HAMLINE J. PUB. L. & POL'Y 67, 75 n.54 (1993). The Swine Flu Immunization Program can be distinguished from another attempt by Congress to address liability for unknown side effects resulting from vaccines, the National Childhood Vaccine Injury Act of 1986 (NCVIA). *See* Pub. L. No. 99-660, 100 Stat. 3755 (1986) (codified as amended in scattered sections of 42 U.S.C.); *see also* Anne E. Wells, Comment, *Regulating Experimental AIDS Drugs: A Comparison of the United States and France*, 13 LOY. L.A. INT'L & COMP. L.J. 393, 416–17 (1990) (describing the NCVIA). That Act "created a federal compensation system for reactions and lasting injuries caused by seven childhood disease vaccines." *Id.* at 417.

90 *See generally* Merrill, *supra* note 35, at 107–20 (proposing manufacturer liability for prescription drug injuries).

91 The problem stems from determining whether the claimant's adverse reaction was caused by the vaccine. *See* Hanlon v. Sec'y of Health & Human Servs., 191 F.3d 1344, 1349–50 (Fed. Cir. 1999) (affirming finding of lower court that child's tuberous sclerosis

sation program are nonproblematic. The risks are measurable ex ante, and the vaccine recipients are typically passive and do not control the relevant variables that produce adverse side effects. In light of the potential viability of these statute-based EL programs, it is puzzling that one encounters them only rarely outside of workers' compensation. Any drafter with an understanding of insurance fundamentals should be able to make them work. This author believes that the explanation is primarily political. The interests affected on all sides must be politically important enough to get the legislature's attention. Once this happens, statutory EL tends to become the proverbial "political football."[92] Even workers' compensation, which has been around for a hundred years, reflects this reality.[93]

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condition, rather than a tetanus vaccine, was the actual cause of afebrile seizures the child suffered subsequent to vaccination); Pociask v. Sec'y of the Dep't of Health & Human Servs., No. 96-569V, 1999 WL 199053, at *16–*20 (Fed. Cl. Mar. 24, 1999) (finding plaintiff failed to establish that tetanus vaccine was cause-in-fact of her fibromyalgia condition that occurred five weeks after vaccination); Gurr v. Sec'y of Health & Human Servs., 37 Fed. Cl. 314, 319–20 (1997) (holding parents failed to establish that diphtheria-pertussis-tetanus vaccine given to infant, who died of Sudden Infant Death Syndrome eleven days after vaccination, was either the cause of an injury listed on an injury table for the purposes of the NCVIA, or was the cause-in-fact of death); *infra* note 99; *see also* Derry Ridgway, *No-Fault Vaccine Insurance: Lessons from the National Vaccine Injury Compensation Program*, 24 J. HEALTH POL. POL'Y & L. 59, 63 (1999) (noting the "troublesome aspects of proving that an immunization caused an injury" for certain injuries that do not appear on a table of vaccines, associated harms, and time periods); Karin Schumacher, Note, *Informed Consent: Should It Be Extended to Vaccinations?*, 22 T. JEFFERSON L. REV. 89, 110 (1999) (noting that it is precisely because of the difficulty in proving that a vaccination is the cause-in-fact of an injury that most claimants under the NCVIA choose to claim an injury listed on the Act's injury table, which entitles the plaintiff to a statutory presumption the vaccine caused that particular injury).

92 The federal swine flu program remains a notable exception. *See supra* note 89.

93 A number of states have revised their workers' compensation systems in recent years, surrounded by considerable political controversy. For sources detailing state reform of workers' compensation, see Michelle Emery, *Governors Say Educated Work Force Key*, BANGOR DAILY NEWS, Oct. 18, 2000, at B5 (noting that a Maine governor serving during the 1980s led the state through reform of its workers' compensation laws, making Maine "more attractive to businesses"); Katherine Gregg, *Minimum Wage Hike Advances*, PROVIDENCE J., June 22, 2000, at A1 (noting that in 2000, the Rhode Island state senate approved a "detailed revision of the state's workers' compensation law" including an increase in the maximum benefit), *available at* 2000 WL 21735285; Ralph Z. Hallow, *Racicot Withdraws Under Fire*, WASH. TIMES, Dec. 21, 2000, at A1 (noting that the governor of Montana had reformed state workers' compensation laws); and Rachanee Srisavasdi, *Disability Payments Could Be Increased*, ORANGE COUNTY REG., Apr. 10, 2000 (Supp.), at 5 (noting that California reformed its workers' compensation scheme in 1993 to "cut costs of the then $8.7 billion system").

Such reforms have often come under public and political scrutiny, not only by probusiness lawmakers who contend that existing systems are overly protective of workers and too costly, but also by workers' rights advocates who contend that reforms and current laws often fail to adequately protect workers. *See, e.g.*, Martha T. McCluskey, *The Illusion of Efficiency in Workers' Compensation "Reform,"* 50 RUTGERS L. REV. 657, 662 (1998) (criticizing the efficiency rationale and widespread perception that workers' compensation costs had reached "crisis levels" during the 1980s and 1990s that are cited by most states to justify widespread enactment of "substantial restrictions" on benefits for injured workers); Emily

From this brief comparison of traditional court-made and statute-based EL systems in this country, an interesting but frustrating conclusion seems unavoidable. Court-made EL systems tend to avoid political obstacles, but are likely to be unworkable; statute-based EL systems, in contrast, can be made workable but tend to be unacceptable politically. The bottom line is this: at the practical level, EL plays a decidedly minor role in American liability law.

II
THE ROLE OF EL IN MAINSTREAM AMERICAN PRODUCTS LIABILITY

A. Where Products Liability and EL Come Together: Manufacturing Defects and Section 402A of the *Restatement (Second) of Torts*

Since the early 1960s and even before, American courts have held product manufacturers and other commercial distributors strictly liable for harm caused by manufacturing defects.[94] Because the test for defects is mechanical—a physical departure from the product unit's intended design[95]—and because the liability is strict and does not require proof of negligence, liability for harm caused by manufacturing defects constitutes an EL-based insurance system in the truest sense.[96] The drafters of section 402A of the *Restatement (Second) of Torts* clearly had manufacturing defects in mind when they committed—or

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A. Spieler, *Injured Workers, Workers' Compensation, and Work: New Perspectives on the Workers' Compensation Debate in West Virginia*, 95 W. VA. L. REV. 333, 354–62 (1992–93) (detailing how the rising cost of workers' compensation has increasingly intensified the "political disputes" regarding workers' compensation in "many states," and in West Virginia in particular); Patrick Crowley, *Patton Will Address Lawmakers: Session May Take Up Workers' Comp*, CINCINNATI ENQUIRER, Dec. 26, 2000 (detailing Kentucky governor's attempts to shore up support from coal miners angered by the governor's success at implementing "major" reform of workers' compensation laws in 1996), *available at* http://enquirer.com/editions/2000/12/26/loc_patton_will_address.html (last visited Jan. 28, 2002); Bob Mellow, Editorial, *GOP Using Rules to Thwart Will of People*, YORK DAILY REC., May 21, 2000, at 3 (noting that the Republican-dominated Rules Committee of the Pennsylvania state senate successfully "stifled" debate there regarding changes to Pennsylvania's workers' compensation law).

94 *See, e.g.*, Greenman v. Yuba Power Prods., Inc., 377 P.2d 897, 900 (Cal. 1963) (holding manufacturer of defective combination power tool strictly liable for injuries to plaintiff). *See generally* JAMES A. HENDERSON, JR. & AARON D. TWERSKI, PRODUCTS LIABILITY: PROBLEMS AND PROCESS 81–91 (4th ed. 2000) (discussing the development of strict liability in the context of manufacturer defects).

95 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2(a) (1998); I OWEN ET AL., *supra* note 53, § 7:1.

96 *See supra* note 7 and accompanying text. A purist might insist that courts and commentators use the phrase "enterprise liability" only when the entirety of an enterprise's commercial activities triggers strict liability. But one may use "enterprise" more discretely, as long as one maintains the proper boundaries.

thought they were committing—the future of American products liability law to the principles of EL.[97] Failure by the drafters to anticipate the subsequent rise to dominance of product design and warning litigation, which clearly is not compatible with EL, doomed their sweeping commitment to failure.[98] But it remains true to this day that liability for manufacturing defects in every American jurisdiction represents one of the clearest examples of EL ever established by judge-made law.

That strict liability for manufacturing defects satisfies the conditions for viability is clear on a brief review. The boundaries are crisp and do not rely on a vague standard of reasonableness. Neither aspect of causation is particularly problematic. None of the "edges of science" issues from toxic-substances litigation are involved,[99] and the "results within the risk" proximate causation issue receives firm guidance from the defect concept.[100] Regarding the viability of EL insurance for manufacturing defects, several features combine to place control of the relevant risks in the hands of product distributors. Most importantly, the defect that eventually causes harm must have been present at the original time of distribution—and release of control—by the defendant.[101] Commercial distributors are not strictly liable for physical defects that occur after distribution,[102] and courts deny recovery to plaintiffs who discover defects and proceed to use or consume the defective products.[103] With respect to manufacturing defects, the purchase of a new product unit resembles the placement of a wager on a roulette wheel. No one knows whether the particular unit contains a defect, but the manufacturer knows the odds almost exactly. Once the wheel is spun, no player may deliberately affect the outcome. When a purchaser's number comes up—when an original defect causes accidental harm—an insurance payout is due.[104] Courts and commentators from the very start have understood the insurance

97 *See* Priest, *supra* note 7, at 505.

98 *See* James A. Henderson, Jr. & Aaron D. Twerski, *A Proposed Revision of Section 402A of the* Restatement (Second) of Torts, 77 CORNELL L. REV. 1512, 1515 (1992).

99 *See, e.g.*, Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 582–601 (1993).

100 *See generally* HENDERSON & TWERSKI, *supra* note 94, at 207–15 (discussing proximate causation and reasonably foreseeable harm in manufacturer defect context).

101 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 cmt. c (1998) (plaintiff bears burden of establishing that manufacturing defect existed when product left manufacturer's hands).

102 A growing number of courts recognize post-distribution duties that sound in negligence. *See id.* §§ 10–11; *see also* HENDERSON & TWERSKI, *supra* note 94, at 375–81 (discussing recent cases holding that post-sale failure-to-warn cases are governed by the negligence theory).

103 *See* RESTATEMENT (SECOND) OF TORTS § 402A cmt. n (1965).

104 *See supra* note 96 and accompanying text.

implications of this form of strict liability, and have explained and justified it in these terms.[105]

B. Where EL Has No Logical Relevance: Liability for Failure to Warn

Product manufacturers are liable for harm caused by their negligent failures to warn about hidden risks whenever an adequate warning would have reduced those risks by inducing the purchaser either to decide not to purchase the product or to use or consume the product more carefully.[106] The inherent incompatibility between the failure-to-warn concept and EL is obvious when one considers the problems with drawing adequate boundaries. Since the beginning, courts have connected the phrase "failure to warn" with fault.[107] A manufacturer fails to warn when it fails to act reasonably in communicating information concerning product-related risks.[108] A few courts have considered attributing to manufacturers time-of-trial knowledge of risks that were scientifically unknowable at the time of distribution.[109] But the majority of courts reject this approach, treating product manufacturers' liability for failure to warn, including actual and proximate causation, as part of negligence law.[110]

This decision to treat failure to warn as a part of negligence-based liability is not simply a function of using "failure to warn" terminology. Once courts single out the manufacturer's failure to provide useful and needed information about product risk as a ground for liability separate and independent from the brute fact that the product caused plaintiff's harm, they can treat such failure only under the negligence rubric.[111] As has been observed, one form of strict liability would impose liability for risks that were scientifically unknowable at the time of distribution. But no system could insure against such risks. For an insurance system to function—for the manufacturer to charge the appropriate premiums at the time the manufacturer distributes the product—the manufacturer must be able to ascertain the covered

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105 *See supra* note 14.

106 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. §§ 1, 2(c) (1998).

107 *See* M. Stuart Madden, *The Duty to Warn in Products Liability: Contours and Criticism*, 89 W. VA. L. REV. 221, 222 (1987); Dix W. Noel, *Manufacturer's Negligence of Design or Directions for Use of a Product*, 71 YALE L.J. 816, 817 (1962).

108 *See, e.g.*, Olson v. Prosoco, Inc., 522 N.W.2d 284, 289 (Iowa 1994) ("In practice, the courts [purporting to apply strict liability] slip back into the type of analyses virtually identical to those employed in negligence cases. Inevitably the conduct of the defendant in a failure to warn case becomes the issue." (citations omitted)).

109 *See* cases cited *supra* note 3.

110 *See* cases cited *supra* note 4.

111 If one did not single out failure to warn, all that would be left would be the sort of design-based claim considered in the next section. *See infra* Part II.C.

risks.[112] Returning to an earlier metaphor, the operator of a roulette wheel cannot commit to a schedule of payouts without knowing the odds before each spin. Moreover, not mentioned earlier, for insurance to function properly, the losses insured against must not be highly correlated—it must not be possible, or at least not very likely, that most or all insureds will suffer covered losses at the same time. Similarly, most property loss insurance contracts exclude losses caused by earthquakes, floods, power failures, war, and nuclear hazards for this reason.[113] In the case of roulette, there must be house rules limiting how much can be wagered at one time on a single number.[114] Scientifically unknowable risks tend to be toxic or pharmaceutical, and have the potential of harming multitudes of victims at once. To impose strict liability on manufacturers for failing to warn of scientifically unknowable risks would obligate them to insure against highly correlated losses, the occurrence probabilities of which they cannot ascertain at the time of distribution when they must charge the necessary premiums. It follows that an EL system for manufacturers' failures to warn would be quite unworkable. Fault-based liability is the only rational option available to the courts.

C. Somewhere Between EL and Negligence: Liability for Defective Designs

Conceptually, manufacturers' liability for harm caused by defective product designs combines features of both strict liability for manufacturing defects and fault-based liability for failure to warn. On the one hand, like manufacturing defects, design defects relate to the tangible aspects of the product itself; marketing defects in contrast, relate to the intangible element of risk information. On the other hand, like warning defects, design defects involve generic hazards shared by every unit in the product line. Given the mechanical similarities between manufacturing and design defects, courts and commentators find it easier than with warnings to talk of "strict liability for defective design." However, as is clear from a careful examination of the holdings, most courts hold manufacturers liable for their designs not as part of a strict EL system but on the basis of the manufacturers' negligence.[115] Not surprisingly, this judicial response reflects the conditions, identified in previous discussions, that are necessary for an EL

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112 *See supra* text preceding note 26.

113 *See* ABRAHAM, *supra* note 25, at 223.

114 *See* GRAHAM & TULCEA, *supra* note 74, at 41 (explaining that even though many casinos limit roulette bets to $500 or $1000, the maximum amount that can be wagered on a single number is often a much lower figure, typically in the range of $25).

115 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 cmt. d (1998) ("Assessment of a product design in most instances requires a comparison between an alternative design and the product design that caused the injury, undertaken from the viewpoint of a reason-

system to maintain viability. Regarding the drawing of workable boundaries, the only rational boundary for an EL system covering product designs would be an inclusive "all commercially distributed product designs that cause harm" formulation. Narrower, less-inclusive formulations that avoid explicit reliance on notions of reasonable safety, such as "product designs that malfunction,"[116] "product designs that violate regulatory safety standards,"[117] and "product designs that fail to conform to factual representations or express warranties,"[118] constitute rational alternatives. But the first two are better dealt with conceptually as part of the fault-based system for defective design,[119] while one may consider the latter contractual rather than tort-based.[120] Upon reflection, if courts replace the existing fault-based system for harm caused by product designs with a rationally conceived EL system, the EL system would necessarily involve holding commercial distributors liable in tort for the harm their product designs—that is, their products—cause.

That such an EL system covering harm caused by commercially distributed products would not be viable is clear from previous discussions. To begin with, issues involving causation would defy sensible resolution. All product-related accidents are caused by more than one product in the but-for, cause-in-fact sense.[121] Returning to an example relied on in an earlier discussion of workers' compensation,[122] suppose that the worksite operator of the runaway forklift lost control because she was intoxicated from having consumed liquor from a hip flask, and that a co-worker struck by the forklift tripped over a trash receptacle before falling head-first into a punch press. Assume further that all of these products were necessary conditions to the second worker suffering injury, and that the injured worker seeks recovery under the EL system against the distributor of each product. Which of the products actually caused the plaintiff's harm? It would appear that all of them—forklift, liquor, hip flask, trash receptacle, and

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able person. That approach is also used in administering the traditional reasonableness standard in negligence.").

116 *See id.* § 3.

117 *See id.* § 4.

118 *See id.* § 9.

119 The malfunction rule is analogous to res ipsa loquitur from negligence, *see id.* § 3 cmt. a, and violation of safety regulation is analogous to per se negligence, *see id.* § 4 cmt. d.

120 Breach of express warranty, like misrepresentation, involves the failure of defendant's design to conform to affirmations in defendant's distribution contract. *See id.* § 9 cmt. e.

121 Again, the EL system here does not require a product defect. Thus, if a consumer injures herself when she falls off a chair, the table at which she was sitting in order to drink beer would be a but-for cause of her harm, as would the beer itself.

122 *See supra* text following note 73.

punch press—were but-for causes of the harm.[123] Does it follow that the manufacturers of all of these products are jointly and severally liable to the plaintiff? If so, what about the manufacturers of the delivery trucks that originally delivered these products to the workplace?[124]

Readers may react to these questions by asking some of their own: "Was anything *wrong* with any of these products? Why not determine which of them proximately—as opposed to actually—caused plaintiff's harm?" Regarding whether anything was wrong with the products, one should bear in mind that the type of EL we are considering here, covering all generic product risks, does not purport to rely on whether they are defective in any way. Causation, not defect, is the liability trigger in EL for generic product risk, and in the forklift hypothetical, actual causation flounders badly as a criterion for determining the application of such a system of EL. What about relying on proximate causation to sort things out? That concept also flounders because, without the linchpin of defect as a normative guide, it begs all of the important questions.[125] All commercially distributed products are included in the EL system because all of them have the potential to cause harm, which is exactly what all of them did in the fork-lift hypothetical—they caused harm. Perhaps only abnormally dangerous products should be included in the EL system. That adjustment, however, would not only raise serious boundary problems,[126] but would also beg the substantive question of which products are abnormally dangerous. In connection with the hypothetical, forklifts and punch presses would clearly qualify as abnormally dangerous, but so, arguably, would liquor and workplace trash receptacles.[127] And certainly the trucks that delivered those products to the workplace would qualify as abnormally dangerous, would they not? On any view, the unworkability of the causation trigger in a product design EL system would seriously threaten its viability.

Even if one could somehow resolve causation problems, manufacturers under such an EL regime could not hope to operate viable insurance systems covering losses caused by their products. Unlike the

123 *See supra* note 121 and accompanying text.

124 This possibility is not as much of a stretch as it may at first appear. Trucks hauling explosives would clearly be but-for causes of an in-transit explosion. Equally clearly, once one expurgates completely the notion of product defect, trucks that deliver explosives that exploded thirty minutes later would also be but-for causes of the explosion in the "brute sense."

125 *See* Henderson & Twerski, *supra* note 59, at 1267 (introducing idea of defect concept as "linchpin").

126 *See supra* notes 45–46 and accompanying text.

127 Liquor would certainly be high on anyone's "ten most wanted" list. And one could characterize anything intended to be on the floor around workplace machinery, at least in terms of its potential for causing harm, as a dangerous tripping device.

game of roulette, which does not allow players to increase their chances of winning or the amounts of their wagers after the wheel has been spun, here product users, consumers, and victims could deliberately affect both variables with substantial impunity. Even if defenses such as contributory fault, product misuse, product modification, and the like were available to defendants,[128] such rules could never adequately accommodate the variety of post-distribution product uses and modes of consumption that could dramatically affect an enterprise's exposure under EL. Adverse selection and moral hazard would surely combine to destroy the integrity of an EL system for all product-caused harms.

In order to appreciate the hopelessness of trying to operate a broad EL system for harm caused by product designs, it is useful to reflect briefly on why the existing fault-based system of liability for defective designs works comparatively well. The major reason, of course, is that the traditional fault-based concept of design defect places the lion's share of responsibility for avoiding design-related losses on those who control the relevant risks: individuals who use, consume, and are otherwise affected by commercially distributed products. The fault-based concept of design defect identifies the limited aspects of product use and consumption that manufacturers can and should control through their designs. Clearly, manufacturers can reduce some risks associated with post-distribution use and consumption. Momentary lapses in user attentiveness, for example, effectively can be reduced by adjusting product designs ahead of time, and manufacturers must exercise reasonable care to make such adjustments.[129] But accident victims or those who negligently cause harm to the victims through product-related behavior must bear responsibility for most of the harm caused by the use and consumption of products.[130] Scholars may dream of a world in which design-based EL is viable; but in the meantime all of us must live in the world we have.

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128 *See* HENDERSON & TWERSKI, *supra* note 94, at 633–36 (discussing affirmative defenses to design defect liability).

129 *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 cmt. *l* (1998) ("In general, when a safer design can reasonably be implemented and risks can reasonably be designed out of a product, adoption of the safer design is required . . . . [I]nstructions and warnings may be ineffective because users of the product . . . may be likely to be inattentive . . . .").

130 Again, one may inadvertently read the text to be saying that victims or users *of defective products* must bear the losses. That is not what the text is saying, however. Rather, it is making the much more obvious and noncontroversial point that when an over-tired driver falls asleep at the wheel of a nondefective automobile and crashes, a court cannot, and should not, hold the automobile manufacturer responsible for the driver's injuries.

III
ECHOES OF EL IN PRODUCT DESIGN AND WARNING LITIGATION

A. Identifying the Relevant Paradigm: The Roulette Wheel Revisited

This Part describes unique factual circumstances, arising from time to time in product design and warning litigation, that tempt courts to depart from mainstream negligence principles and to impose pockets of strict EL in the midst of an otherwise unbroken expanse of fault-based liability. As might be expected, these are cases in which courts that are otherwise firmly committed to the traditional requirement that plaintiff establish a defect in design or marketing confront what they intuitively perceive to be roulette-wheel situations functionally similar to those involving manufacturing defects, in response to which courts routinely and properly impose strict EL.[131] But the following cases involve allegedly defective designs and failures to warn. In these cases, courts appear to appreciate the existence of roulette-wheel circumstances and respond by stretching existing doctrine and imposing what functionally amounts to strict EL. Rather than breaking openly with orthodoxy, a possibility considered in the next Part, courts extend existing doctrine beyond the normal limits, insisting all the while that they are engaged in "business as usual." And yet the stretches are sufficiently great as to be unmistakable to an informed observer. Moreover, even those who, like this author, prefer courts generally to follow existing law are not likely to be greatly offended by these stretches because, instinctively, the stretches resonate with the deeper themes identified in this Article.[132]

B. Echoes of EL in Product Design Litigation

A good example of the phenomena here being examined is the California Court of Appeal's decision in *Bresnahan v. Chrysler Corp.*[133] The plaintiff in that case suffered serious injuries to her elbow when, momentarily distracted while driving her automobile at relatively low speed, she rear-ended the vehicle in front of her. The driver-side airbag deployed, pushing her left arm violently into the windshield's side pillar.[134] Plaintiff claimed that the airbag was defective in design because it disappointed reasonable consumer expectations by causing,

131 *See supra* notes 95–96 and accompanying text.

132 To those who object to what courts have done in these cases, the "stretches" will be seen as "distortions."

133 38 Cal. Rptr. 2d 446 (Ct. App. 1995).

134 *Id.* at 448.

instead of preventing, serious injury.[135] The trial court dismissed on the ground that the consumer expectations test was not available because airbags involve "new technology" about which consumers are unable to form expectations of safety.[136] The Court of Appeal reversed and remanded for trial, ruling that even if defendant's airbag design was as safe as it could possibly be, the disappointment of consumer expectations resulting from its harmful deployment would suffice to support design-based liability.[137]

The Court of Appeal's holding in *Bresnahan* is clearly inconsistent with prior decisions of the Supreme Court of California. The leading decision, which *Bresnahan* purports to follow and apply,[138] limits application of the consumer expectations test to cases in which a product design malfunctions—dangerously fails to perform as it was manifestly intended to function.[139] In *Bresnahan*, the airbag clearly performed as its manufacturers intended.[140] Moreover, when a product malfunctions, quite obviously it could have been designed to be safer, a circumstance that *Bresnahan* prevents the defendant from even attempting to negate on remand.[141] Not surprisingly, a subsequent airbag decision on similar facts by a different division of the California Court of Appeal pointedly declined to follow *Bresnahan*'s interpretation of the consumer expectations test.[142] So it is reasonable to conclude that *Bresnahan*'s application of existing California law constitutes reversible error.[143]

The point here is not to criticize *Bresnahan* doctrinally, but to observe that the court's decision is at least understandable in offering a strict EL response to a roulette-wheel fact pattern. Drivers of automobiles are quite reasonable in allowing—indeed, in desiring—airbags

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135 *Id.* at 449. Plaintiff's counsel insisted that he would establish "that the ordinary consumer would not expect this touted safety device to cause this type of injury." *Id.*

136 *Id.* at 448–50.

137 *Id.* at 451.

138 *Id.* at 451–52.

139 *See* Soule v. Gen. Motors Corp., 882 P.2d 298, 308 n.3 (Cal. 1994) ("For example, the ordinary consumers of modern automobiles may and do expect that such vehicles will be designed so as not to explode while idling at stoplights, experience sudden steering or brake failure as they leave the dealership, or roll over and catch fire in two-mile-per-hour collisions."); *cf. supra* note 119 and accompanying text (discussing the rule for product malfunctions).

140 Airbags deploy at the relatively low speed involved in *Bresnahan* because deployment helps much more than it hurts at those speeds in most cases. *See infra* note 145.

141 *See Bresnahan*, 38 Cal. Rptr. 2d at 452 ("Risk-benefit weighing is not a formal part of, nor may it serve as a 'defense' to, the consumer expectations test.").

142 *See* Pruitt v. Gen. Motors Corp., 86 Cal. Rptr. 2d 4, 7 (Ct. App. 1999) (stating that "[t]he discussion of the consumer expectations test in . . . *Bresnahan*" "conflicts with our Supreme Court's discussion of the applicability of the test in *Soule*").

143 *See* HENDERSON & TWERSKI, *supra* note 94, at 515 ("Needless to say, the authors believe that the court in *Pruitt* got it absolutely right.").

in their vehicles.[144] In general, airbags prevent many more injuries than they cause.[145] And while drivers obviously control how they drive as a general matter, the type of momentary inadvertence involved in *Bresnahan* does not constitute deliberate risk-taking and is certain to recur frequently and randomly in the course of normal driving.[146] The odds of being seriously injured by low-speed airbag deployment are small,[147] and obviously the injuries sustained when the driver is mis-positioned can be serious enough to warrant a lawyer's pursuing recovery on a contingent fee arrangement. Finally, the causation issue is typically straightforward enough not to give courts independent reason to hesitate.[148]

When one reflects upon the relevant trade-offs, injuries caused by low-speed airbag deployment are analogous not only to injuries caused by manufacturing defects but also to injuries caused by vaccines dispensed in mass immunization programs. In all of these examples, a few users or consumers suffer serious harm passively, through no real fault of their own, while using and consuming products in ways that benefit many more users and consumers, often by saving them from serious injury. Strict EL is imposed by courts in connection with manufacturing defects[149] and by the federal legislature in connection with at least one publicly administered vaccine.[150] So why

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144 *See supra* note 139.

145 *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., THIRD REPORT TO CONGRESS: EFFECTIVENESS OF OCCUPANT PROTECTION SYSTEMS AND THEIR USE iv (1996). In that report, the National Highway Traffic Safety Administration noted:

> [A]ir bags may involve a trade off among certain types of injury. The addition of an air bag to the lap-shoulder belt user increases head injury protection and chest injury protection (at the moderate and serious injury levels), while at the same time increasing the risk of moderate and serious arm injury. However, injuries to the head and chest pose much greater life-threatening risks than do arm injuries.

Id. at iv; *see also* Barbara L. Atwell, *Products Liability and Preemption: A Judicial Framework*, 39 BUFF. L. REV. 181, 213 n.180 (1991) (noting that Allstate Insurance President Richard Haayen stated that not only had airbags been determined to be effective by his company's research and use of them, but that "[t]heir record of preventing or sharply reducing deaths and serious injuries in more than one *billion* miles of actual travel is unparalleled in highway safety annals" (quoting Richard J. Haayen, *The Airtight Case for Air Bags*, SATURDAY EVENING POST, Nov. 1986, at 36, 38)); Dana P. Babb, Note, *The Deployment of Car Manufacturers into a Sea of Product Liability? Recharacterizing Preemption as a Federal Regulatory Compliance Defense in Airbag Litigation*, 75 WASH. U. L.Q. 1677, 1677–78 (1997) (noting that while airbags prove an expensive but effective safety feature for adults, there is concern about the propensity of airbags to severely injure or kill children and small adults).

146 *See supra* note 129.

147 Much more often, drivers' arms will be on the steering wheel and the airbag deployment will cause no serious harm.

148 The one area where conceptual difficulties might arise is in connection with the "enhancement of injuries" phenomenon in crashworthiness situations. *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 16 (1998).

149 *See supra* notes 94–95 and accompanying text.

150 *See supra* note 89 and accompanying text.

not impose EL insurance coverage in connection with low-impact airbag deployments even if airbag designs are reasonably safe when judged by traditional standards? By asking this rhetorical question the author does not mean to imply that the decision in *Bresnahan* is appropriate when one considers its doctrinal impact on future design litigation. Courts should limit the consumer expectations standard recognized by the California Court of Appeal in *Bresnahan* to product malfunctions, lest very great mischief transpire when they apply it lawlessly in a broader range of design cases. But even a curmudgeon like this author can look at *Bresnahan* with a less-jaundiced eye, appreciating the intuitive power of the roulette-wheel paradigm.

The "very great mischief" that can stem from overly broad application of the consumer expectations test for defective design deserves brief elaboration. As noted earlier, some observers believe that the "most are helped while a few get hurt" scenario, epitomized by the roulette-wheel metaphor, is a useful way of viewing the entire system of producing and distributing products in a market economy.[151] Philosophically, this author has no particular quarrel with that way of looking at things from a broad perspective. Real problems arise, however, in attempting to translate such a vision into a workable regime of tort liability. As this Article demonstrates, a comprehensive EL system covering all generic product hazards would not be viable. Undaunted, some observers,[152] including a minority of courts,[153] have fixed upon the idea of allowing "disappointment of consumer expectations" to function as a test for design defect even when the narrower version of the roulette-wheel factual scenario in *Bresnahan* is absent. Under such a broad application of the consumer expectations test, courts would impose design-based liability even when manufacturers could not have made the designs safer and when manufacturers made or broke no express warranties. In effect, this hit-or-miss version of EL based on consumer expectations would provide insurance coverage

151 *See supra* note 10 and accompanying text.

152 *See, e.g.*, F. Patrick Hubbard, *Reasonable* Human *Expectations: A Normative Model for Imposing Strict Liability for Defective Products*, 29 MERCER L. REV. 465 (1978); Marshall S. Shapo, *A Representational Theory of Consumer Protection: Doctrine, Function and Legal Liability for Product Disappointment*, 60 VA. L. REV. 1109 (1974).

153 *See, e.g.*, French v. Grove Mfg. Co., 656 F.2d 295, 298–99 (8th Cir. 1981) (holding that an ironworker struck by a crane need not prove the existence of a "feasible and safer alternative," but must only show that the crane was "unreasonably dangerous" as judged by the expectation of an ordinary user); Kudlacek v. Fiat S.p.A., 509 N.W.2d 603, 610–11 (Neb. 1994) (holding that an automobile passenger severely injured in a rollover accident must show that the vehicle's design was unreasonably dangerous, in that it had a "propensity for causing physical harm beyond that which would be contemplated by the ordinary user or consumer who purchases it," and that "Nebraska no longer requires proof of an alternative design for a claimant to recover under a claim of defective design").

selectively and retroactively whenever juries whimsically decide, on the facts of individual cases, that such coverage is socially appropriate.

The minority of courts that indulge in this overly broad application of the consumer expectations test for defective design are probably not even aware that they are applying a whimsical, hit-or-miss version of EL. Relying on language taken out of context from a comment to section 402A of the *Restatement (Second)*,[154] these courts believe that they are applying mainstream concepts of design defect.[155] Some courts even allude vaguely to the circumstance that the manufacturer's advertising is to blame for raising consumer expectations of safety, although these advertisements involve no express warranties or factual misrepresentations.[156] Given that manufacturers in a market economy quite understandably try, through advertising, to make their

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154 *See* RESTATEMENT (SECOND) OF TORTS § 402A cmt. i (1965) ("The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer . . . .").

155 The seminal decision in California, *Barker v. Lull Engineering Co.*, 573 P.2d 443, 455–56 (Cal. 1978), upon which the later decision in *Soule v. General Motors Corp.*, 882 P.2d 298 (Cal. 1994), discussed *supra* note 139, builds, recognized the consumer expectations test as an independent standard, along with the negligence standard, for determining the defectiveness of product designs. *Soule* later limited application of the consumer expectations test to cases of product malfunction, *see supra* note 139 and accompanying text, but for more than fifteen years California courts treated consumer expectations as a mainstream, all-purpose design standard.

156 An example of this whimsical, unworkable version of EL is found in the decision of the Oregon intermediate court of appeals in *McCathern v. Toyota Motor Corp.*, 985 P.2d 804 (Or. Ct. App. 1999), *aff'd*, 23 P.3d 320 (Or. 2001). The plaintiff, injured when a sport-utility vehicle rolled over during a high-speed turn, alleged a design defect based on both the availability to defendant of a safer alternative design and the disappointment of consumer expectations. The trial court entered judgment on a general verdict for plaintiff and defendant appealed. The appellate court held that plaintiff's proof of a safer design was sufficient and affirmed plaintiff's judgment. *Id.* at 817. Regarding plaintiff's second basis for recovery, the court explained that the manufacturer's advertising may raise consumer expectations of stability, disappointment of which renders the design defective even if the representations are too vagne to constitute express warranties or tortious misrepresentations. *See id.* at 817–20. In effect, if the defendant promotes its vehicle as safe and worthwhile, juries may impose strict liability whenever bad things happen. Whatever sympathy this author may have expressed earlier for the California court's misapplication of the consumer expectations test in *Bresnahan*, *see* text accompanying notes 144–50, sympathy for misapplication of that test in *McCathern* would clearly be inappropriate. EL cannot rest on the case-by-case reactions of juries to the hypothesized psychological effects of product advertising. Under the intermediate appellate court's holding in this case, future courts can interpret a wide range of aberrant user behavior as part of the manufacturer's responsibilities as insurer, by merely pointing to advertising that arguably raises expectations. Adverse selection and moral hazard would combine to destroy the integrity of any EL system based upon the intermediate court's holding in *McCathern*. On appeal, the Supreme Court of Oregon affirmed judgment for plaintiff, but beld that the representational version of consumer expectation had no basis in Oregon law. *See* McCathern v. Toyota Motor Corp., 23 P.3d 320, 332 (Or. 2001). For a somewhat more extended critique of the intermediate appellate court's decision in *McCathern*, see James A. Henderson, Jr. & Aaron D. Twerski, *Product Design Liability in Oregon and the New Restatement*, 78 OR. L. REV. 1 (1999).

products attractive to consumers, imposing strict EL whenever a jury finds that promotion of a product has raised consumer expectations requires manufacturers to operate insurance systems covering risks that the users and consumers control. For the reasons developed in this analysis, the integrity of such insurance schemes would be compromised from the outset.

C. Echoes of EL in Failure-to-Warn Litigation

A number of courts confronting the roulette-wheel paradigm and finding no basis for liability in mainstream doctrine have stretched the rules governing failure-to-warn to achieve pockets of EL, producing the "echoes" of interest in this Article. Warnings doctrine is generally more flexible than design defect doctrine,[157] providing courts with all the leeway necessary to "do justice" in individual cases.[158] Thus, when the mainstream rules do not support intuitively satisfying outcomes in response to roulette-wheel fact patterns, some courts have recognized duties to warn about risks that are so widely known, or negligible in magnitude, that warning of them could never realistically help anyone to avoid injury.[159] Moreover, given the inherent uselessness of the warnings required in these cases, together with the potential negative effects such warnings could have on product marketing, it appears that manufacturers have responded rationally by choosing not to warn and simply insuring against their exposures to what they perceive (accurately enough) to be strict EL.[160]

An example of an appellate decision couforming to this pattern is *Hon v. Stroh Brewery Co.*,[161] in which relatively moderate beer drinking—two or three cans per night, four nights per week, for six years—caused plaintiff's decedent to die from pancreatitis at a young age. The trial court granted defendant's motion for summary judgment on

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157 *See generally* James A. Henderson, Jr. & Aaron D. Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U. L. REV. 265 (1990) (discussing the dimensions of the failure-to-warn doctrine that produce excessive liability for manufacturers).

158 The concept of "iuformed choice" increases flexibility even further. The seminal decision is *Borel v. Fibreboard Paper Products Corp.*, 493 F.2d 1076 (5th Cir. 1973). *Cf. infra* notes 174–85 and accompanying text (discussing courts' use of the "informed consent" model to impose strict liability in design and warning cases).

159 In theory, the warning gives the consumer the choice to avoid the risk by not using or consuming the product. But when the risk is very remote and the benefits of using or consuming are substantial, the warnings would only affect especially superstitious or excitable persons. *Cf. infra* note 166 and accompanying text (discussing how in some cases warning of remote risks will have only limited effect and deter rational use of the product).

160 Again, almost all reasonable consumers would go ahead and use or consume the product, so why warn and make things unpleasant? Given the remoteness of the risks involved, punitive damages are out of the picture. The author's empirical evidence in support of the assertion in the text is anecdotal.

161 835 F.2d 510 (3d Cir. 1987).

the ground that the potentially serious health risks from repeated consumption of alcohol are so widely known as not to require a warning, and that the particular risk of developing pancreatitis is so extremely remote as to render a warning useless to those who, like the youthful decedent, enjoy drinking beer in moderation.[162] The court of appeals reversed, reasoning that a jury could find that beer drinkers do not know about the risk of pancreatitis and that it should be the subject of a warning.[163] Whether or not liability in this case would make sense from the perspective of failure-to-warn jurisprudence—this author thinks it does not—it makes good sense from the standpoint of EL jurisprudence. The beer drinker in *Hon* faced a roulette-wheel scenario. Moderate beer consumption is reasonable; the risk of pancreatitis is remote and consumers cannot control it by the manner in which they drink beer. The effects, when they occur, are life-threatening. Covering decedent's loss with strict EL is no more problematic than doing the same thing with respect to losses caused by manufacturing defects.

Although it appears obvious that warning consumers of such a remote risk would have no more effect on rational consumer behavior than would warning about the risk of manufacturing defects,[164] the decision of the appeals court in *Hon* nevertheless makes sense on its facts. And the same conclusion probably makes sense in connection with a decision in Washington State in which the court upheld a verdict against the manufacturer of baby products for failing to warn parents of the remote risk of brain damage to their infant from breathing in a mist of baby oil from an open bottle.[165] The only likely effect such a warning would have on consumer behavior would be to frighten a few parents away from rationally deciding to keep baby oil in their homes.[166] Neither beer nor baby oil to this day carry the sorts of warnings that these courts purported to require, based on this author's informal field research.[167] Yet even if every American jurisdiction imposed liability on the same facts, no such warnings would appear and the manufacturers' exposures to strict liability would be manageable under the EL principles developed in this Article.

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162 *See id.* at 514–16.

163 *Id.* at 514.

164 Again, some consumers might choose not to use or consume when reminded of the remote chance of a defect, but such a reaction would not be rational. *See supra* note 159 and accompanying text.

165 *See* Ayers v. Johnson & Johnson Baby Prods. Co., 797 P.2d 527 (Wash. Ct. App. 1990), *aff'd*, 818 P.2d 1337 (Wash. 1991).

166 Some parents might choose to keep baby oil in the house, but treat it as if it were rat poison. Indeed, that apparently is what the parents in *Ayers* did. *See id.* at 536 (Reed, J., dissenting).

167 I checked Johnson & Johnson baby oil in Ithaca, New York and Coral Gables, Florida, and found no warnings about aspiration.

What are not manageable, however, are the potentially crushing liabilities that some judicial decisions impose in cases that, while superficially similar on their facts to the beer and baby oil cases just described, do not present the roulette-wheel paradigm. Thus, in *McGuire v. Joseph E. Seagram & Sons, Inc.*,[168] the plaintiffs were chronic alcoholics who consumed massive quantities of distilled spirits over many years. Plaintiffs alleged that the defendant liquor distillers failed to warn them of the details of the drink-induced maladies that eventually killed them. The Texas trial court dismissed and plaintiffs appealed.[169] The appellate court reversed, sending the case back for trial.[170] Although the Supreme Court of Texas thereafter reversed the intermediate court and reinstated the trial court's dismissal on the ground that the risks from chronic, abusive drinking are widely known and thus negate any duty to warn,[171] the intermediate court's decision is worth considering for its relevance to this analysis. *McGuire* is distinguishable on its facts from *Hon*, the beer case, inasmuch as *McGuire* did not involve anything even remotely resembling a roulette-wheel scenario. Problem drinkers are not passive victims, as was the moderate beer drinker in *Hon*. Liquor distillers cannot effectively control those who consume their products and cannot price discriminate against problem drinkers.[172] It follows that stretching failure-to-warn doctrine to impose strict EL is not even arguably appropriate on the facts in *McGuire* and in numerous other decisions in which the abusive use and consumption of inherently dangerous products brings with it risks of harm that are widely known and generally understood.[173] In such cases, manufacturers cannot insure against the risk when the individuals covered by the insurance exert substantial control over the risks after the manufacturers distribute the products.

It remains to consider a different doctrinal path by which courts may impose marketing-based strict liability on manufacturers for generic product risks that courts have traditionally handled under negligence. Confronted with a roulette-wheel situation, a court may invoke the iuformed-consent model borrowed from medical malpractice cases.[174] On this view, the consumer's threshold choice of whether to purchase or consume a product attendant with unavoidable risks of

168 790 S.W.2d 842 (Tex. Ct. App. 1990), *rev'd*, 814 S.W.2d 385 (Tex. 1991).

169 *See id.* at 853.

170 *Id.*

171 *See McGuire*, 814 S.W.2d at 388.

172 *See, e.g.*, Russell v. Bishop, No. 88, 1986 WL 653 (Tenn. Ct. App. Jan. 7, 1986) (declining to extend liquor distiller's liability for the negligent acts of alcohol consumers).

173 *See generally* Henderson & Rachlinski, *supra* note 24 (concluding that EL for harm caused by cigarette smoking is not viable).

174 *See, e.g.*, Bang v. Charles T. Miller Hosp., 88 N.W.2d 186, 190 (Minn. 1958) (articulating the rule that a physician must inform his patients of known alternatives to the proposed treatment when no emergency exists).

injury is analogous to a patient deciding whether to consent to risky medical treatment. In the medical context, some courts have treated the physician's duty to disclose as having less to do with risk-reduction than with respecting and protecting the dignitary values inhering in the patient's right to choose.[175] Several tactical advantages accompany judicial reliance on informed choice as a means of imposing strict EL in roulette-wheel products situations. For one, the relative triviality of the nondisclosed risk poses less of an obstacle conceptually because the objective, after all, is not simply to increase safety, but also to preserve dignity. For essentially the same reason, but-for causation presents fewer difficulties because even if the consumer would have consented if told of the risk, the point is that she was *not* told, and the mannfacturer argnably infringed her dignity interests regardless of how she might have responded had the manufacturer treated her with more respect.[176]

The U.S. Court of Appeals for the Second Circuit relied on informed-choice warnings to impose strict liability in *Liriano v. Hobart Corp.*[177] In that case, a young, inexperienced worker lost his arm in an industrial meat grinder whose safety guard had been forcibly removed by the employer. Barred by worker compensation from suing the employer in tort,[178] the plaintiff asserted design and warning claims against the machine manufacturer in federal district court in New York. On defendant's appeal from a judgment for plaintiff on the failure-to-warn claim, and after the New York Court of Appeals had answered a certified question,[179] the federal court of appeals affirmed the judgment for plaintiff. Judge Guido Calabresi, a prominent law-and-economics theorist who has written extensively about EL,[180] explicitly relied on the informed-choice concept.[181] While the risks of working with an unguarded grinder were obvious, he reasoned that the manufacturer should have warned the plaintiff that a guard could be put back on the machine so that the young man would, at least theoretically, have had the choice of quitting in protest if his employer refused to replace the guard.[182] The facts in *Liriano* support two conclusions: first, that the plaintiff, a young immigrant who des-

175 *See, e.g.*, Franklin v. United States, 992 F.2d 1492, 1496 (10th Cir. 1993) (explaining the difference between negligence and battery theories in the context of medical malpractice).

176 *See* HENDERSON ET AL., *supra* note 60, at 56 (noting that "[u]nder battery, whether or not the plaintiff would have consented [if warned] is irrelevant").

177 170 F.3d 264 (2d Cir. 1999).

178 *See supra* note 66 and accompanying text.

179 *See* Liriano v. Hobart Corp., 700 N.E.2d 303 (N.Y. 1998).

180 *See, e.g.*, GUIDO CALABRESI, THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970).

181 *See Liriano*, 170 F.3d at 270.

182 *See id.* at 270–71.

perately needed the job and who had been hired "off the books" at minimum wage,[183] faced a dangerous roulette-wheel situation by agreeing to work under those conditions;[184] and second, that the court's talk of informed choice and plaintiff's asking his employer to replace the guard is largely symbolic, invoked in an attempt to justify the court's imposition on the manufacturer of what amounts to thinly veiled strict liability.[185]

As with the other design and warning cases in which echoes of EL are detectable, the Second Circuit's decision in *Liriano* is clearly open to criticism from a doctrinal standpoint. At the same time, the outcome is arguably satisfying from the broader perspectives developed in this analysis. Clearly, the manufacturer of meat grinders cannot effectively insure against the risks to workers from their employers grossly disabling built-in safety devices.[186] Indeed, the New York state court's answer to the certified question in *Liriano* partially abrogated a long-standing rule in New York affording manufacturers a strong defense when post-sale product alterations take place.[187] But in *Liriano*, under a special New York rule allowing manufacturers to recover full indemnity from negligent employers,[188] the jury allocated most of the responsibility for the accident to the employer, so that the manufacturer presumably paid only a very small portion of the judgment.[189] To the extent that imposing strict EL on the manufacturer in *Liriano* allowed the manufacturer to serve as a conduit through which most of the liability passed to the employer, the informed-choice concept served a useful purpose. After all, the worker compensation statute barred the plaintiff from bringing an action directly against the employer. However, in other jurisdictions that do not allow manufacturers to recover substantial indemnity against employers who significantly modify workplace machinery,[190] *Liriano*'s imposition of EL on the manufacturer sets a dubious precedent. On balance, as the next Part discusses, extending *Liriano*'s informed-choice analysis any further than that case's unusual factual circumstances would be a mistake. Employed expansively, the informed-choice version of failure-to-

183 These facts are not mentioned in Judge Calabresi's opinion, but were part of the undisputed proof at trial. The author argued *Liriano* in the New York Court of Appeals.

184 *See supra* text accompanying note 36.

185 Given the plaintiff's desperate circumstances—in effect, a wage slave to his employer—receiving a reminder that he could quit in protest over the safety guard's removal was of absolutely no help to him.

186 *See supra* notes 59, 128–30 and accompanying text.

187 *See* Robinson v. Reed-Prentice Div. of Package Mach. Co., 403 N.E.2d 440, 441 (N.Y. 1980).

188 *See* Dole v. Dow Chem. Co., 282 N.E.2d 288 (N.Y. 1972).

189 *See* Liriano v. Hobart Corp., 170 F.3d 264, 266 (2d Cir. 1999).

190 *See, e.g.*, Kotecki v. Cyclops Welding Corp., 585 N.E.2d 1023, 1027 (Ill. 1991).

warn doctrine embraces lawlessness in the form of sending every warning claim to the jury.[191]

IV
WHY THESE ECHOES OF EL WILL NOT SUPPORT AN INDEPENDENT LIABILITY RULE

The analysis to this point seems to leave matters in an uneasy state of irreconcilable tension. On the one hand, the judicial impulses giving rise to these doctrinal stretches are understandable, and sometimes even justifiable, given the roulette-wheel scenarios the cases present to courts. On the other hand, even if understandable, these doctrinal extensions threaten to undermine the integrity of traditional rules of liability for product design and marketing, lessening their capacity to generate sensible, consistent outcomes in the more usual run of cases. One way to ease these tensions—to relieve the pressures on traditional doctrine—would be for courts to recognize a new, independent liability rule based explicitly on the roulette-wheel paradigm. The factual characteristics of that paradigm are readily identifiable. Thus, in all of the roulette-wheel cases considered in the preceding analysis, the choice to use or consume the product that ultimately causes harm is manifestly reasonable; for example, one can hardly fault a consumer for choosing to drive an automobile equipped with an airbag, as in the *Bresnahan* decision in California.[192] Moreover, in each case, between the consumer's choice to use or consume the defendant's product and the eventual accident, one cannot expect either the product user or consumer, or any bystander victim, to increase the relevant risks deliberately in ways that significantly increase the defendant's exposure to liability.[193] And in all of these rou-

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191 For the general proposition that sending every claim to the jury would be lawless, see Henderson & Twerski, *supra* note 157, at 290 ("Without adequate restraints on the exercise of unreviewable jury discretion, the liability system drifts into lawlessness."). The Reporter's note to RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 cmt. i (1998) explains that courts have applied informed-choice theory only in cases involving toxics and prescription drugs, where consumers are passive victims of product-related injury. Applying informed-choice doctrine to more complex producer-consumer relationships, such as imposing a duty to inform a consumer about the crashworthiness of different automobile models, would add little, if anything, to true informed choice on the part of the consumer because such warnings would by necessity address numerous issues such as speed, point of collision, and use of seatbelts, thus rendering the waruing hopelessly complex. Use of informed-choice theory in such scenarios would merely circumvent the restraints of traditional warnings doctrine, thereby enabling otherwise meritless claims to reach the jury. For a criticism of the *Liriano* court's use of informed-choice theory, see Hildy Bowbeer & David S. Killoran, Liriano v. Hobart Corp.: *Obvious Dangers, the Duty to Warn of Safer Alternatives, and the Heeding Presumption*, 65 BROOK. L. REV. 717, 750 (1999).

192 Bresnahan v. Chrysler Corp., 38 Cal. Rptr. 2d 446 (Ct. App. 1995).

193 For example, one would not normally expect drivers of automobiles to deliberately increase the probability of airbag deployment at low speed, given the potential for injury.

lette-wheel cases, at the time the choice to use or consume is made, the likelihood of an accident of the sort that causes harm is remote and the magnitude of the harm in the event the accident should occur is great.[194] Might not these elements combine in a new liability rule that imposes EL straightforwardly in roulette-wheel cases, without the need for courts to stretch, and possibly distort, existing products doctrine?

That a workable rule could not be formulated is clear. As discussed earlier, the first and arguably most important condition that must be satisfied for an EL-based insurance system to function properly is the establishment of bright-line boundaries that do not require fact-sensitive determinations on a case-by-case basis.[195] Courts and the commercial enterprises affected by EL must be able to determine as a matter of law which commercial activities will bring liability without fault. Only if the generalized criteria observed in roulette-wheel cases will support bright-line categorization ahead of time, as is true in connection with the ultrahazardous activities doctrine discussed earlier,[196] will the requisite EL boundaries be feasible. The underlying criteria, by themselves, will not suffice as guides to decision. Unlike the checklist of factors in connection with ultrahazardous activities,[197] the factors here do not describe the sorts of activities on the part of manufacturers that should bring strict liability. Instead, the underlying criteria in roulette-wheel cases describe functional constraints on the behavior of product users, consumers, and putative victims that are necessary for an EL insurance system to mitigate adverse selection and moral hazard. Because the common factors derived from roulette-wheel scenarios do not describe activities in which enterprises engage, it would be inherently impossible for courts to employ those factors to formulate, ahead of time, workable categories of commercial activities upon which to impose EL.

Might it be possible, in the alternative, for courts or legislatures to elaborate upon the fact patterns giving rise to the echoes of EL, thereby establishing bright-line categories of commercial activities upon which to impose strict liability? For example, this Article earlier identified the low-speed deployment of a standard, driver-side airbag in *Bresnahan* as a paradigm of the sort of roulette-wheel fact pattern giving rise to the echoes of EL described in this Article. Might not

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Indeed, the accident in *Bresnahan* did not come about by the driver's deliberate risk-taking conduct, but rather by her momentary inadvertence. *Id.* at 448.

194 *See, e.g.*, Hon v. Stroh Brewery Co., 835 F.2d 510, 517 (3d Cir. 1987) (reversing lower court grant of summary judgment against plaintiff who died of pancreatitis after six years of moderate consumption of alcohol).

195 *See supra* Part I.B.

196 *See supra* Part I.C.1.

197 *See supra* note 44.

courts or legislatures recognize the provision of airbags by automobile manufacturers to be the functional equivalent of engaging in commercial blasting under the abnormally-dangerous-activity rule, and thereby hold manufacturers strictly liable for harm directly caused to vehicle occupants by explosive airbag deployments? At first blush, such a rule appears plausible enough. Vehicle manufacturers either provide airbags or they do not, and disputes over whether the device that injured the plaintiff is or is not an airbag are unlikely to arise sufficiently frequently, or plausibly, to threaten the system's viability.

Upon reflection, however, a rule imposing EL for harm caused by airbag deployment would surely prove unworkable. *Bresnahan* involved a relatively low-speed deployment that caused significant harm, supporting the conclusion that the forceful deployment of the airbag made things much worse for the plaintiff. If the rule retained the factual elements of low speed and significant harm, disputes would arise over whether the impact in a particular case was or was not "low speed," or whether the plaintiff's harm was or was not "significant," dissolving any hope for maintaining bright-line boundaries. If the rule abandoned the low-speed impact element, and all airbag deployments—even those at higher speeds—were to give rise to strict liability, then it would be questionable whether such impacts were beyond the driver's control in a substantial percentage of cases.[198] And including higher-impact deployments in the EL scheme would introduce intractable issues of causation. Even if an airbag broke the plaintiff's jaw, should the claim be valid if the airbag also saved the plaintiff's life? And quite apart from these sorts of problems, singling out airbags for EL treatment would appear arbitrary. If airbags are suitable for EL treatment, why not other features of a vehicle's interior that reduce trauma to occupants in collisions but that also are capable of causing serious injury? In order to avoid the appearance of arbitrariness, lawmakers would have to include seatbelts in the new EL regime.[199] But one can make the same argnment for steering wheels, steering columns, and dashboards, all of which, when properly de-

198 *See generally* Steven Peterson et al., *Are Drivers of Air-Bag-Equipped Cars More Aggressive? A Test of the Offsetting Behavior Hypothesis*, 38 J.L. & ECON. 251 (1995). The authors conducted statistical analyses of insurance data and police accident reports, concluding that "drivers of air-bag-equipped cars tend to be more aggressive than drivers of cars not so equipped, [and] that their added aggressiveness diminishes the protection afforded drivers of cars equipped with air bags and imposes additional risks on occupants and passengers in other vehicles." *Id.* at 262. *But see* Fridulv Sagberg et al., *An Investigation of Behavioural Adaptation to Airbags and Antilock Brakes Among Taxi Drivers*, 29 ACCIDENT ANALYSIS & PREVENTION 293, 301 (1997) (concluding that drivers increase risk-taking behavior in response to accident-reducing measures, such as antilock brakes, to a greater extent than for injury-reducing measures, such as airbags).

199 *See supra* Part I.B.

signed, assist some vehicle occupants by reducing the severity of accident-related trauma.[200]

These problems of line-drawing and demarcation would haunt and ultimately defeat any attempt to establish a workable EL system for harm resulting from generic product hazards. In connection with judicial extensions of failure-to-warn doctrine, the decision in *Ayers*, in which parents recovered when their infant son inhaled baby oil and suffered brain injury,[201] may be understandable in light of the roulette-wheel implications of keeping such a product in a home occupied by young children. But what about feeding young children peanut butter? Or marshmallows? In two well-known appellate decisions condoning liability based on failure to warn of these risks,[202] parents were either feeding the children or supervising them when the accidents occurred. In both cases, courts held that juries should decide, as in the baby oil case, whether the manufacturers are liable for failure to warn. These extensions of liability are clearly questionable. As in *McGuire*, involving distilled spirits consumed by chronic drinkers, manufacturers of foodstuffs cannot control the various ways in which children, with or without parental supervision, consume their products. It follows that the EL-based insurance implicit in stretching failure-to-warn doctrine to hold manufacturers responsible for such post-distribution consumer behavior will not prove viable in the longer run.[203] One arrives at the same conclusions in response to a wide range of cases in which children suffer harm interacting with

200 Lest the reader balk at the idea that such components serve a purpose analogous to that of airbags—or think that doctrinal mechanisms are not already in place to address instances of harm caused by such components—the case law bears out the facts that (a) both manufacturers and consumers take quite seriously the safety function of, for example, collapsible steering columns; and (b) courts have consistently applied to claims of harm caused by such components the standard doctrines of either negligence (for claims of defective design) or strict liability (for claims of manufacturing defect). *See, e.g.*, Higginbotham v. Volkswagenwerk Aktiengesellschaft, 551 F. Supp. 977 (M.D. Pa. 1982) (finding an absence of proof that collapsible steering column malfunctioned), *aff'd*, 720 F.2d 662 (3d Cir. 1983) (unpublished table decision); Kurzke v. Nissan Motor Corp., 752 A.2d 708, 713–15 (N.J. 2000) (reversing the trial court's *forum non conveniens* dismissal of plaintiff's suit for an accident that occurred in Germany—in a vehicle that the plaintiffs were induced to purchase by representations that the collapsible steering column would serve the purpose of an airbag—because proof of negligent design of the vehicle's steering column would be better facilitated in New Jersey); Fouche v. Chrysler Motors Corp., 692 P.2d 345, 347 (Idaho 1984) (litigating issue of whether steering column properly collapsed).

201 Ayers v. Johnson & Johnson Baby Prods. Co., 797 P.2d 527 (Wash. Ct. App. 1990), *aff'd*, 818 P.2d 1337 (Wash. 1991); *see also supra* note 166 and accompanying text (discussing *Ayers*).

202 *See* Fraust v. Swift & Co., 610 F. Supp. 711 (W.D. Pa. 1985); Emery v. Federated Foods, Inc., 863 P.2d 426 (Mont. 1993).

203 *See supra* 172–73 and accompanying text.

products clearly intended primarily for adult use and consumption.[204] Only those who manage risks of those sorts can insure against them—parents and others entrusted with the care of young children. When manufacturers can adjust product designs cost-effectively to reduce or eliminate these risks, courts should, and will, hold manufacturers liable if they fail to make those adjustments.[205] But holding manufacturers liable for failing to warn that young children sometimes choke on various sorts of commercially distributed food imposes the functional equivalent of EL, and courts should proceed cautiously when considering whether to extend failure-to-warn doctrine.

These same problems of line-drawing will plague judicial attempts to extend other roulette-wheel scenarios beyond their bounds. Consider, for example, the *Hon* decision, in which a young man's family survived summary judgment when relatively moderate beer consumption triggered a rare and fatal disease.[206] As discussed earlier, that decision may make sense on its facts. But what levels of alcohol consumption should courts consider "moderate" for EL purposes?[207] It is one thing for courts occasionally and surreptitiously to stretch traditional liability rules to allow recovery when confronted with a fact pattern containing powerful roulette-wheel characteristics. It would be quite another to attempt to expand upon these isolated examples and create a formal and more widely applicable liability rule. To the extent that open-ended versions of the consumer expectations test for defective product design[208] and the informed-choice test for failure to warn that was considered in the previous Part[209] constitute thinly veiled attempts to achieve EL on a case-by-case, "jury's whim" basis, they should be rejected for their inherent lawlessness.[210] Occasional stretches of traditional liability rules are preferable to cynical, higher-profile abandonments of the rule of law.

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204 *See, e.g.*, Jennings v. BIC Corp., 181 F.3d 1250, 1256 (11th Cir. 1999) (holding manufacturer of lighters not strictly liable for the foreseeable injuries to a child because the lighters "are not intended to be used as children's playthings").

205 *See supra* note 129 and accompanying text.

206 Hon v. Stroh Brewery Co., 835 F.2d 510 (3d Cir. 1987).

207 *Compare* McGuire v. Joseph E. Seagram & Sons, Inc., 790 S.W.2d 842 (Tex. Ct. App. 1990), *rev'd*, 814 S.W.2d 385 (Tex. 1991) (holding that chronic alcoholics who consumed massive quantities of liquor on a daily basis could pursue a lawsuit against the liquor distiller for failing to warn about the alcohol-induced illnesses that eventually killed the plaintiffs), *with Hon*, 835 F.2d at 511 (holding that plaintiff could recover when moderate beer consumption resulted in pancreatitis).

208 *See supra* notes 152–56 and accompanying text.

209 *See supra* notes 174–91 and accompanying text.

210 *See supra* note 191 and accompanying text.

CONCLUSION

The echoes of enterprise liability described in this analysis should be interesting not only to students of American products liability but also to students of the legal process. Good and sufficient reasons exist for keeping design and warning litigation focused primarily on manufacturers' negligence even if some courts insist on doing so under the largely symbolic rubric of "strict liability." Imposing a broad-based system of strict enterprise liability for generic product hazards would place manufacturers in the untenable position of insuring against accidental losses over which product users, consumers, and victims exercise substantial control. Not only would causation issues be difficult to resolve, but the capacity of insureds to increase the likelihood and magnitude of claims upon, and after, coming within insurance coverage would threaten to destroy the integrity of those systems under the combined assaults of adverse selection and moral hazard. Writers who advocate across-the-board enterprise liability for all the harms that products cause either do not understand how insurance works or are referring to a dream world of Platonistic forms.

And yet fact patterns arise that offer compelling reasons for courts to depart from traditional negligence and impose strict enterprise liability on manufacturers for harm caused by generic product hazards. These are roulette-wheel situations in which would-be claimants sensibly choose to expose themselves or others to remote risks of substantial product-related harms and are not, after making the threshold choice to use or consume, in a position deliberately to increase the likelihood or magnitude of loss. The ideal judicial reaction to these situations might be to fashion black-letter rules recognizing these roulette-wheel circumstances and condoning the imposition of strict liability up front. But the criteria for identifying these fact patterns cannot serve as workable boundaries for enterprise liability. Consequently, courts confronting roulette-wheel scenarios may stretch existing rules of decision to reach the desired outcomes. Courts seem to enjoy greater success in this regard when they manipulate failure-to-warn doctrine. Risks that they would normally deem too remote or too obvious to require warnings suddenly become the basis of successful claims of failure to warn. Anecdotal evidence suggests that these outcomes do not induce manufacturers to issue what would be useless warnings; rather, manufacturers treat the outcomes for what they really are—impositions of strict enterprise liability—and insure accordingly.

In and of themselves, these echoes of enterprise liability constitute rational judicial responses to the understandable human impulse to shift accidental losses suffered by a relatively few victims over to commercial enterprises that can insure those losses and spread them

among the greater number who benefit from use and consumption of the products involved. Courts must exercise care, however, to resist amplifying these echoes into loud choruses of liability—to resist building on these doctrinal stretches to establish wide-reaching and economically ruinous insurance systems that will not work. It follows that these echoes of enterprise liability must remain what they are: isolated, understandable reflections of communitarian themes that run deep in American products liability. Extended beyond their unique boundaries, they portend trouble for design and warning litigation in the years to come.